GENERAL CALENDAR 1970/1971

Loyola
OF MONTREAL

Loyola
OF MONTREAL

GENERAL
CALENDAR
1970/1971

IT IS MY PRAYER THAT YOUR LOVE MAY GROW
RICHER AND RICHER IN KNOWLEDGE AND
PERFECT INSIGHT SO THAT YOU MAY HAVE A
SENSE OF WHAT IS VITAL AND MAY BE MEN OF
TRANSPARENT CHARACTER AND BLAMELESS LIFE.

St. Paul to Philippians 1, 9 & 10

Ad Maiorem Dei Gloriam

1 9 7 0 - 1 9 7 1

7141 SHERBROOKE ST. WEST
MONTREAL   TEL. 482-0320

ARTS COMMERCE ENGINEERING SCIENCE

TABLE OF CONTENTS

Loyola
OF MONTREAL

50 acres of beautiful campus providing an opportunity for a complete academic experience as part of an exciting metropolis.

Included in the following code are buildings located in the immediate vicinity of the main campus.

1 ADMINISTRATION BUILDING
2 CENTRAL BUILDING
3 REFECTORY
4 HIGH SCHOOL
5 CHAPEL AND F. C. SMITH AUDITORIUM
6 VANIER LIBRARY
7 BOOKSTORE, CAFETERIA
8 PHYSICAL SERVICES
9 HINGSTON HALL, "A" BLOCK
10 HINGSTON HALL, "B" BLOCK
11 HINGSTON HALL, DINING ROOM
12 JESUIT RESIDENCE
13 ST. IGNATIUS PARISH CHURCH
14 BRYAN BUILDING
15 DRUMMOND SCIENCE LIBRARY
16 DRUMMOND SCIENCE BUILDING
17 DRUMMOND SCIENCE AUDITORIUM
18 HACKETT BUILDING
19 CLORAN BUILDING
20 ATHLETIC COMPLEX
21 EAST PARKING LOT
22 WEST PARKING LOT
23 ATHLETIC PARKING LOT
24 CENTENNIAL HALL
   6935 and 6937 Sherbrooke Street West.
25 LANGLEY HALL
   (WOMEN'S RESIDENCE)
   6900 Sherbrooke Street West.
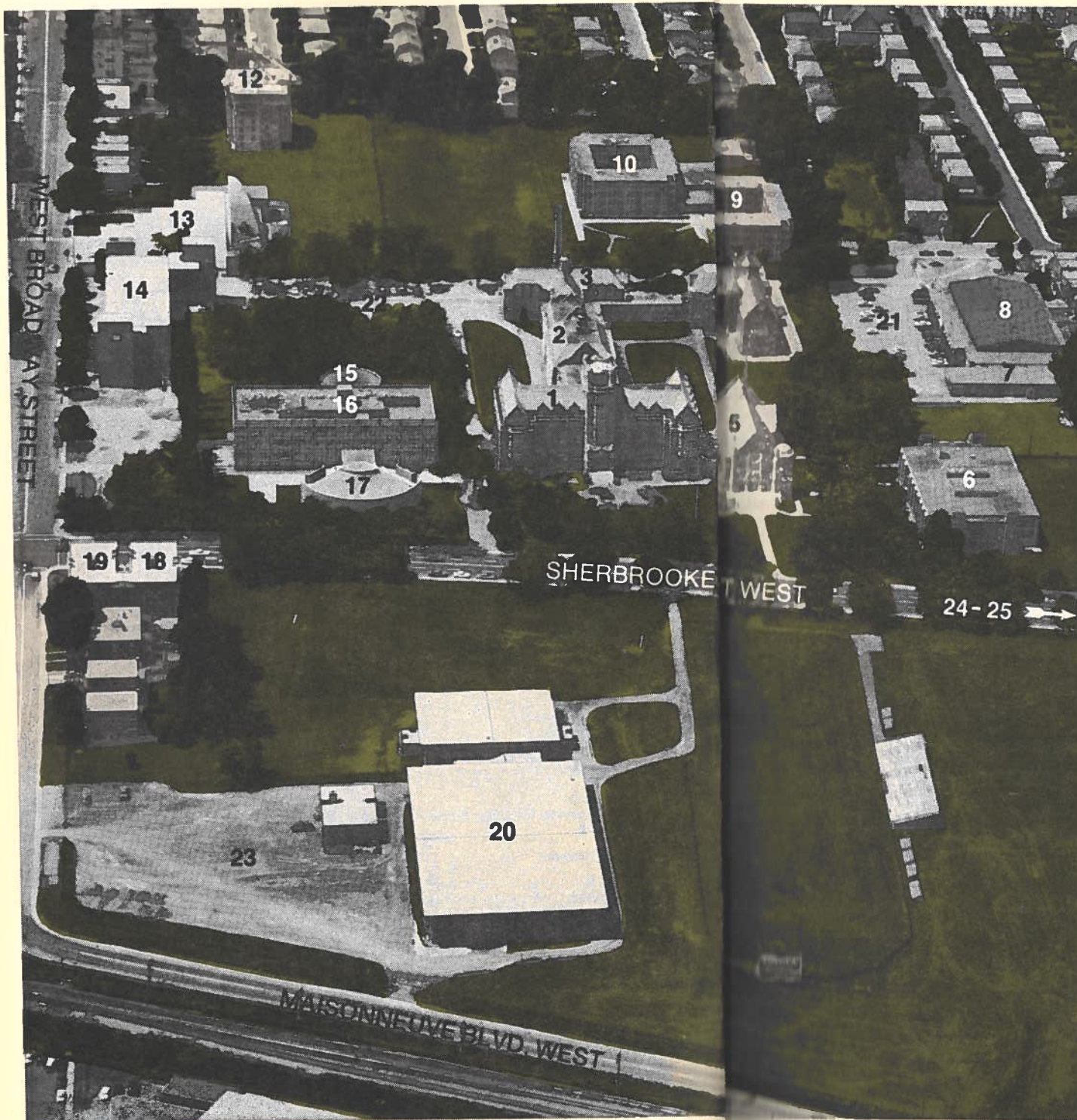
ACADEMIC CALENDAR 1970-1971

SUMMER

1 9 7 0

MAY
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

JUNE
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

JULY
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

AUGUST
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

WINTER

1 9 7 0 - 7 1

SEPTEMBER
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

OCTOBER
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NOVEMBER
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

DECEMBER
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

JANUARY
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

FEBRUARY
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

MARCH
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

APRIL
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

1970
September

8   Payment of fees for Arts IV, Commerce IV, Engineering IV and Science IV students............................9:00 A. M.
       12:00 Noon

Registration of Arts IV, Commerce IV, Engineering IV and Science IV students............................1:00 P. M.
       5:00 P. M.

9   Payment of fees for Commerce III, Engineering III and Science III students...............................9:00 A. M.
       12:00 Noon

Registration of Commerce III, Engineering III and Science III students...............................1:00 P. M.
       5:00 P. M.

10   Payment of fees for Arts III students.................9:00 A. M.
       12:00 Noon

Registration of Arts III students......................1:00 P. M.
       5:00 P. M.

17   First term lectures begin.
Late registration begins.

21   Last day for late registration.

30   Last day for course changes, additions and deletions.

October
12   Thanksgiving Day — Full holiday.

25   Fall Convocation.

December
9   First term lectures end.

10   Mid-year final examinations begin.

1971
January
4   Second term lectures begin.

8   Last day for course changes, additions and deletions (Second term half courses only).

February
5   Father President's Holiday — Full holiday.

March

12 Founders' Day.

April

2 Last day of lectures.

14 Final examinations begin.

May

7 Last day for submitting documents needed to justify aegrotat standing and special examinations.

29 Convocation.

June

1 Last day for making application to enter Loyola.

15 Last day for making appeal to have an examination paper reviewed.

July

15 Last day for returning preregistration forms.
Last day for making appeal to repeat year.
Last day for making application to write supplemental and special examinations.

August

9 Supplemental and special examinations begin.

MEMBERS OF THE SENATE

Ex-Officio
Fr. P. G. Malone, S.J.
Fr. J. O'Brien, S.J.
Dean L. Bessner
Fr. R. Breen
Fr. A. Graham, S.J.
Dean G. Joly
Mr. J. Noonan
Mr. D. Potvin
Dean R. Shearer

Appointed
	Term Ends
Prof. J. Doyle	
Fr. R. T. Cronin, S.J.	June 30, 1972

Elected — Arts
Dr. F. G. W. Adams	June 30, 1972
Dr. M. Andersen	June 30, 1971
Prof. S. Kelly	June 30, 1970
Dr. J. Lavery	June 30, 1971
Prof. J. Moore	June 30, 1971
Dr. D. Savage	June 30, 1971
Mr. R. Stock - *student*	June 30, 1970
Prof. J. Tascone	June 30, 1972
Prof. K. Waters	June 30, 1970

Elected — Science
Prof. J. Jenkins	June 30, 1972
Mr. D. Mooney - *student*	June 30, 1970
Dr. T. Nogrady	June 30, 1970
Fr. E. O'Connor, S.J.	June 30, 1971
Prof. A. Prillo	June 30, 1970

Elected — Commerce
Mr. A. Handel - *student*	June 30, 1970
Prof. J. R. Hanrahan	June 30, 1971

Elected — Engineering
Prof. C. Goldman	June 30, 1972

OFFICERS OF ADMINISTRATION

President	Very Rev. Patrick G. Malone, S.J., B.A., Ph.L., M.A., S.T.L.
Assistant to the President	R. P. Duder, B.A., M.A.
Vice-President, Academic	To be announced
Vice-President, Administration	A. J. Ferrari, B.Comm., C.A., R.I.A.
Dean of Arts	To be announced
Assistant Dean of Arts	Rev. R. Breen, B.A., M.S., S.T.L., Ph.D.
Dean of Science	Rev. J. A. Graham, S.J., B.A., M.A., S.T.L.
Dean of Commerce	M. L. Bessner, B.Comm., L.A., C.A.
Dean of Engineering	G. W. Joly, B.A., B.Eng., M.Eng.
Director of Evening Division	D. J. Potvin, B.A.
Director of Collegial Students	W. J. Cozens, B.A.
Dean of Students	R. Shearer, B.A., M.A.
Chaplain	Rev. J. S. O'Neill, S.J., B.A., B.Paed., M.Sc. (on leave)
Supervisor Guidance Centre	Major J. P. Hale
Chief Librarian	G. Trowsdale, B.A. (Lib. Sc.), Lib. Cert.
Treasurer	Very Rev. C. C. Ryan, S.J.
Registrar	J. W. Noonan, B.Sc.
Director of Development	To be announced
Director of Alumni Affairs	B. H. McCallum, B.A.
Public Relations Officer	Norah Frood, B.A.

ADMINISTRATIVE OFFICES

Registrar
Registrar	J. W. Noonan, B.Sc.
Associate Registrar	T. A. Murphy, B.Comm.
Assistant Registrar (Records)	Miss Eileen Gibbons
Assistant Registrar	Miss M. Krausmann, B.A., B.P.E.
Assistant Registrar (Admissions)	L. Zarrelli, B.A.
Assistant to the Registrar	G. Oakes, B.Comm.
Assistant to the Registrar	J. T. Pye, B.A.

Finance and Business

Vice President, Administration	A. J. Ferrari, B. Comm., C.A., R.I.A.
Comptroller	J. E. Ford, C.A.
Budget Officer and Chief Accountant	C. Villemaire, C.G.A.
Treasurer	Rev. C. C. Ryan, S.J., B.A., S.T.L.
Bursar	Alfred St. Amour
Director of Personnel	M. E. McMullan, B.A.
Director of Purchasing	R. J. Lennen
Events Co-ordinator	L. Price
Manager Bookstore	P. Gore

Dean of Students

Dean of Students	R. Shearer, B.A., M.A.
Assistant Dean of Students	G. Meyers, B.A., M.S.
Dean of Men	G. V. Uihlein, Jr., B.Sc., M.Sc.
Dean of Women	Miss M. Fraser, R.N.
Assistant Dean of Women	Miss M. Taylor, B.A., M.A.
Director of Men's Housing	R. J. Eustace, B.A.
Director of Financial Aid	Mrs. F. Haffey
Director of Canada Manpower Centre	Miss E. Allen
Director of Physical Education	E. F. Enos, B.Sc., M.Ed.
Chaplain (Student Counsellor)	Rev. J.S. O'Neill, S.J., B.A., B.Paed., M.Sc.
Director Medical Services	A. Powell, M.D.
Nurse	Miss M. Wheeler, R.N.

Physical Plant

Director of Physical Plant	B. Kelly, B.Sc.
Superintendent	W. Condie

Development

Director of Development	To be announced
Associate Director of Development	Rev. C. C. Ryan, S.J., B.A., S.T.L.
Director of Alumni Affairs	B. H. McCallum, B.A.

Libraries

Chief Librarian	G. Trowsdale, B.A. (Lib. Sc.), Lib. Cert.
Deputy Librarian	J. Princz, B.A., M.A.

Loyola College Faculty Association

President	J. McGraw
Vice President	J. Lavery
Secretary	D. O'Connor
Treasurer	D. McElcheran

FACULTY LIST —

ADAMS, F.G., B.A. (Toronto), M.A. (Toronto), Ph.D. (Chicago)
Associate Professor, History. (On leave; 1st Semester.)

ADKAR, C., B.Eng. (Rensselaer Polytechnic Institute), M.Eng. P.Eng. (McGill)
Sessional Lecturer, Engineering.

AHAD, S.E., M.Eng. (McGill)
Sessional Lecturer, Engineering.

AHOOJA, C.R., B.Sc. (University of Bombay), B.Sc. (University of Michigan)
Special Lecturer, Engineering.

AKIN, W.E., B.A. (Maryland), M.A. (Maryland)
Assistant Professor and Acting Chairman, History.

ALVI, S.A., B.A. (Karachi), M.A. (Karachi), Ph.D. (Colorado)
Associate Professor and Chairman, Economics.

ANDERSEN, Mrs. M., Staatsexamen (Frei Universität, Berlin), Ph.D. (Montreal)
Associate Professor, French Studies.

ANTOLIN, F., B.A. (Leon, Spain), L. ès L. (University of Madrid), D. ès L. (Madrid)
Associate Professor, Modern Languages.

ARGUELLES-CANIVE, Mrs. M.L., B.A. (University of Miami), M.A. (Barry College), Ph.D. (New York University)
Assistant Professor, Sociology.

BAGCHI, S.N., B.Sc. (Calcutta), M.Sc. (Calcutta), D.Sc. (Calcutta)
Professor, Physics

BABARIK, P., B.A. (Toronto), M.A. (Toronto), Ph.D. (Chicago)
Associate Professor, Psychology

BALDWIN, Mrs. M., B.Sc. (University of Tasmania), M.Sc. (University of Tasmania)
Lecturer, Chemistry

BANNISTER, W., B.A., M.A. (University of Western Ontario)
Assistant Professor, Business Administration.

BAUER, J.H., B.A. (Sir George Williams), M.A. (Manitoba), Ph.D. (Manitoba)
Assistant Professor, Psychology

BEDARD, Fr. W., O.F.M., B.A. (Montreal), S.T.D. (Catholic University of America)
Associate Professor, Theological Studies

BESSNER, L.M., B.Comm. (McGill), L.A. (McGill), C.A.
Associate Professor, Accountancy; Dean of Commerce

BLANAR, Dr. M., B.A. (Montreal), B.Paed. (Montreal), M.A. (Montreal), Ph.D. (Montreal).
Associate Professor, English. (On leave).

BOUCHER, J-P., B.A. (Montreal), M.A. (McGill)
Assistant Professor, French Studies.

BOYLE, L.J., B.A. (Montreal), B.Comm. (Montreal), M.A. (McGill)
Assistant Professor, Business Administration.

BREEN, Rev. R., B.A., S.T.L. (Montreal), M.S. (Fordham), Ph.D. (Strasbourg)
Assistant Professor, Theological Studies, Assistant Dean of Arts.

BRENN, B.
Special Lecturer, Communication Arts.

BROEN, A., B.A. (Manhattan College), M.A. (Columbia)
Assistant Professor, English.

BROWN, D., A.B. (Xavier University), Ph.D. (Tubingen).
Assistant Professor, Classics.

BROWNE, W., S.J., B.A. (Montreal), M.A. (St.Mary's, Halifax), S.T.L. (Regis, Toronto), S.T.D. (Gregorian).
Associate Professor, Theological Studies.

BRYNIAWSKY, Z., B.A. (Montreal), M.S.W. (University of British Columbia).
Sessional Lecturer, Sociology.

BUELL, J., B.A. (Montreal), M.A. (Montreal), Ph.D. (Montreal).
Professor, Communication Arts.

CAVANAUGH, B., B.A. (Providence College), M.A. (Catholic University of America).
Assistant Professor, Philosophy. (On leave).

CHOWN, E.H., B.Sc. (Queen's), M.A.Sc. (British Columbia), Ph.D. (Johns Hopkins).
Associate Professor and Chairman, Geotechnical Sciences.

COLLINS, J., B.A. (Duquesne), M.A. (Catholic University of America).
Lecturer, Theology.

COOLIDGE, R.T., B.A. (Harvard), M.S. (Berkeley), B.Litt. (Oxford).
Associate Professor, History. (On leave).

COSGROVE, W., M.Eng. (McGill), P.Eng.
Sessional Lecturer, Engineering.

COSTANZO, A., B.A. (University of British Columbia), M.A. (University of Washington)
Assistant Professor, Modern Languages.

COYTE, R.C., B.A. (Oxford), M.A. (Oxford). Diploma in Political Science and Economics.
Assistant Professor, Political Science.

CRONIN, R.T., S.J., B.A. (Montreal), M.Sc. (Fordham), Ph.D. (Fordham)
Associate Professor, Biology.

CROTTY, Gerard, M.A. (University of Dayton).
Lecturer, Philosophy.

DANIS, M., B.A. (Montreal), M.A. (Fordham), LL.L. (Montreal) Diplome en Droit Constitutionnel et Sciences Politiques (Paris).
Lecturer, Political Science.

DAUDERIS, H.J., B.Comm. (Montreal), C.A.
Assistant Professor, Accountancy

DAVIES, P., B.A. (Northern Illinois), M.A. (Illinois), Ph.D. (Yale).
Assistant Professor, English.

DESAI, B., B.E.E., (Jadavpur University, Calcutta, India), M.S.E.E. (Purdue University).
Sessional Lecturer, Engineering.

DEWEY, G.J., B.A. (Notre Dame), M.A. (Notre Dame), Ph.D. (Notre Dame).
Associate Professor, Sociology.

DHINDSA, K.S., B.Sc. (Panjab), B.Sc. Hons. (Panjab), M.Sc. Hons. (Panjab).
Assistant Professor, Biology.

DI MICHELE, C., Ph.D. (University of Rome).
Assistant Professor, Modern Languages.

DOUGHTY, M., B.Sc., (London), Ph.D. (London)
Associate Professor, Chemistry.

DOYLE, J.P., B.A. (Montreal), B.Paed. (Montreal), M.A. (Montreal)
Associate Professor and Chairman, Philosophy.

DRUMMOND, S., S.J., B.A. (Montreal), M.A. (Toronto), S.T.L., Ph.D. (Toronto)
Professor and Chairman, Biology.

DUDER, R. P., B.A. (McGill), M.A. (Oxon), M.A. (Harvard)
Sessional Lecturer, Political Science.

EAPPEN, C.E., B.Sc. (Travancore), M.Sc., (Bombay), Ph.D. (McGill)
Associate Professor and Chairman, Physics.

EGAN, E., B.A. (Manhattan College), M.A. (Fordham)
Assistant Professor, Philosophy. (On leave)

EKLER, K., B.Sc. (McGill), Ph.D. (McGill)
Associate Professor, Chemistry.

ENGLISH, G. B., B.A. (Montreal), B.C.L. (McGill), M.B.A. (Toronto)
Assistant Professor, Business Administration.

FAIERMAN, M., B.Eng. (McGill), B.Sc. (London), M.A. (Toronto), Ph.D. (Toronto).
Assistant Professor, Mathematics.

FAMIRA-PARCSETICH, H., Ph.D. (McGill).
Assistant Professor, Modern Languages.

FAULKNER, T.C., A.B. (Hope College), M.A. (Miami University at Ohio).
Lecturer, English

FISCHER, C., S.J., B.A. (Montreal), S.T.L. (Immaculate Conception). M.A. (Stanford).
Associate Professor, Communication Arts.

FONDA, C., M.A. (Paris and Venice), Ph.D. (Paris and Venice)
Professor and Chairman, Modern Languages.

GAGNON, C.F., Associate of the Royal Canadian Academy of Arts,
Associate Professor and Resident Artist, Communication Arts.

GALLAGHER, Richard
Special Lecturer, Computer Sciences.

GARNET, P., B.A. (Sheffield), M.A. (Sheffield)
Assistant Professor, Theological Studies.

GERVAIS, M., S.J., B.A. (Montreal), L.Ph. (Immaculate Conception),
M.F.A. (Catholic University of America), M.A. (St.Mary's).
Assistant Professor, Communication Arts.

GOLDMAN, C., B.Eng. (McGill), M.Eng. (McGill), P.Eng.
Associate Professor, Engineering.

GOULET, Jean, B.A. (Loyola College), B.Sc. (University of Montreal) M.A.
(University of Montreal).
Lecturer, Philosophy.

GRAHAM, A., S.J., B.A. (Montreal), M.A. (Toronto), S.T.L. (Gregorian)
Associate Professor and Chairman, Chemistry; Dean of Science.

GRAY, C.B., A.B. (St. Bonaventure), M.A. (Catholic University of America)
Ph.D. (Catholic University of America).
Lecturer, Philosophy.

GRIFFITHS, Major E.R.M., B.A. (Sir George Williams University)
Special Lecturer, Political Science.

HABIB, H., B.A. (American University of Beirut), M.A. (Fordham), Ph.D.
(McGill)
Associate Professor and Chairman, Political Science.

HAYES, F.J., B.Sc. (London), Ph.D. (McGill)
Associate Professor, Economics.

HENKEY, Rev. C., B.C.L. (Gregorian), S.T.D. (Gregorian), Ph.D. (Grego-
rian)
Professor, Theological Studies.

HINNERS, R.C., B.A. (Harvard), M.A. (Toronto), Ph.D. (Toronto)
Associate Professor, Philosophy.

HOFBECK, J., B.A. (Bichstate), C.C.E.S. (Paris, Sorbonne), S.T.L. (Institut
Catholique, Paris), S.T.D. (Institut Catholique, Paris).
Assistant Professor, Theological Studies and Communication Arts.

HOOPER, A.G., B.A. (Leeds), M.A. (Leeds), Ph.D. (Leeds).
Professor, English

HUBBARD, W.H., B.A. (Oregon), M.A. (Columbia)
Assistant Professor, History.

HUSSAIN, M., B.A. (Pakistan), M.A. (Vanderbilt University).
Sessional Lecturer, Economics.

JENKINS, J.T., B.Sc., (McGill), M.Sc. (McGill)
Assistant Professor, Geotechnical Sciences.

JOLY, G.W., B.A. (Montreal), B.Eng. (McGill), M.Eng. (McGill) P.Eng.
Professor and Chairman, Engineering; Dean of Engineering.

JONES, P., L.Ph. (Gregorian), S.T.L. (Gregorian)
Assistant Professor, Theological Studies.

JOOS, E., B.A. (Budapest), M.A. (McGill), L.Ph. (Montreal)
Assistant Professor, Philosophy

KALMAN, C.S., B.Sc., (McGill), M.A. (Rochester)
Assistant Professor, Physics.

KAUFMAN, D.M., B.Eng. (McGill), M.Eng. (McGill), P. Eng.
Lecturer, Engineering

KAWAJA, P., B.Comm. (McGill), M.B.A. (Columbia)
Associate Professor, Business Administration.

KAWCZAK, A.S., L.L.M., M.A. (Cracow), Ph.D. (Warsaw)
Associate Professor, Philosophy

KEVICZKY, A., B.Sc. (Fordham University), M.Sc. (City College of the
City University of New York)
Assistant Professor, Mathematics.

KHAN, E., M.A. (London School of Economics)
Sessional Lecturer, Economics.

KIM, H., B.Sc. (Seoul National University, Korea), M.Sc. (Seoul), Ph.D.
(McGill).
Assistant Professor, Mathematics.

KOVACS, R.L., Diploma Maths-Physics (Budapest), M.Sc. (McGill), Ph.D.
(McGill)
Associate Professor, Physics.

KOVATS, T.A., B.Sc. (Georgetown), Ph.D. (Johns Hopkins)
Assistant Professor, Physics

KRAKOW, K.I., B.Eng. (McGill), M.S. (California Institute of Technology),
P. Eng.
Associate Professor, Engineering.

KRANTZBERG, J.A., B.Eng. (McGill), M.Sc. (McGill), P.Eng.
Assistant Professor, Engineering.

KUBINA, S., B.Eng. (McGill), M.Eng. (McGill), P.Eng.
Associate Professor, Engineering.

LABBE, G., B.A., B.Péd., L. ès L. (Montréal), Doct. de l'Univ. (Paris)
Professor, French Studies.

LADD, H.W., B.Sc. (Johnson State), M.A. (Windsor), Ph.D. (Windsor)
Assistant Professor, Psychology and Communication Arts.

LALLIER, A.G., B.A. (McGill), M.A. (Columbia), International Affairs
Certificate (Russian Institute, Columbia).
Associate Professor, Economics.

LAMBERT, R., B.A. (University of Miami).
Assistant Professor, Psychology.

LANZLO, L., B.A. (University of Illinois), M.A. (Columbia)
Assistant Professor, Political Science.

LAU, H.H., Diplome d'Études Supérieures de Philosophie (Saulchoir), M.A. (Montreal).
Assistant Professor, Philosophy.

LAURION, G., L. ès L. (Montréal) Dipl. d'Ét. Sup., Doct. de l'Univ. (Paris).
Associate Professor and Chairman, French Studies.

LAUZIERE, A., B.A. (Ottawa), M.A. (Montréal), Doct. de l'Univ. (Paris).
Professor, French Studies.

LAVERY, J.J., B.A. (Manitoba), M.A. (Montreal), Ph.D. (Montreal).
Associate Professor and Chairman, Psychology.

LEMPKOWSKI, J.E., B.A. (Chicago), M.A. (Chicago)
Assistant Professor and Chairman, Classics. (On leave).

MacDONALD, D.F., B.Comm. (Sir George Williams), C.A.
Associate Professor, Accountancy.

MacGUIGAN, G., S.J., B.A. (Montreal), M.A. (Toronto), S.T.L.
Associate Professor, English. (On leave)

MacPHEE, H., S.J., B.A. (Montreal), M.A. (Toronto), S.T.L.
Professor, Physics.

McDOUGALL, D., B.Sc. (McGill), M.Sc. (McGill), Ph.D. (McGill).
Professor, Geotechnical Sciences.

McELCHERAN, D., M.Sc. (McMaster), Ph.D. (Leeds).
Associate Professor, Chemistry.

McGRAW, J.G., B.A. (Notre Dame), Ph.B., Ph.L. (Institute of Philosophy, Chicago), Ph.D. (Angelicum, Rome).
Associate Professor, Philosophy.

McGRAW, R.L., B.Comm. (McGill), L.A. (McGill), C.A.
Assistant Professor, Accountancy.

McNAMARA, V.J., B.A. (Toronto), M.A. (Laval), L.Ph. (Laval), D.Phil. (Laval)
Associate Professor, Philosophy.

McPHAIL, T., B.A. (McMaster University), M.A. (State University of New York at Buffalo).
Assistant Professor, Sociology and Communication Arts.

McPHILLIPS, C., B.A. (Montreal), M.B.A. (University of Western Ontario).
Lecturer, Business Administration.

MAHEUX, M.V., B.A. (Montreal), M.A. (Catholic University of America), Ph.D. (McGill).
Associate Professor, Psychology.

MAJUMDAR, K.N., B.Sc. (Calcutta), Ph.D. (Purdue).
Assistant Professor, Mathematics.

MALIK, M., B.A. and M.L. (Boleslav Academy, Czechoslovakia), D.Sc. (Prague).
Associate Professor, Communication Arts.

MARIN, M., M.Sc. (University of Madrid), Ph.D. (University of California).
Sessional Lecturer, Engineering.

MARTIN, R.K., B.A. (Wesleyan University).
Assistant Professor, English. (On leave)

MAX, J.
Special Lecturer, Communication Arts.

MILLS, J.P., B.Sc. (Brigham Young), M.Sc. (Kansas)
Senior Instructor, Geotechnical Sciences.

MONET, J., S.J., B.A. (Montreal), M.A. (Toronto), Ph.D. (Toronto).
Sessional Lecturer, History.

MOORE, J.M.
Special Lecturer, Communication Arts.

MOORE, J.W., B.A. (Carleton), M.A. (Toronto)
Assistant Professor, Political Science.

MOORE, R.C., B.Sc. (Nottingham), M.Sc. (London).
Assistant Professor, Mathematics.

MORGAN, J.D., B.A. (Loyola, Los Angeles), M.A. (Southern California), Ph.D. (Southern California).
Associate Professor, Philosophy.

MORGAN, R.J., B.A. (Windsor), M.A. (Queen's).
Lecturer, History.

MOROZIUK, Rev. P., B.A. (Ottawa), M.A. (Ottawa), S.T.L. (Gregorian), S.T.D. (Pontifical Institute of Eastern Ecclesiastical Studies).
Assistant Professor, Theological Studies.

MOULEDOUX, Mrs. E., B.A. (Tulane University), B.S.L.S. (Louisiana State), M.A. (Louisiana State).
Assistant Professor, Psychology.

MUKHERJI, K.K., B.Sc. (Calcutta), M.Sc. (Calcutta), Ph.D. (Western Ontario).
Assistant Professor, Geotechnical Sciences.

NEILSON, S.A., B.Sc. (McGill), P.Eng.
Sessional Lecturer, Engineering.

NEWELL, A., B.A. (Pittsburgh), M.A. (Pittsburgh), Ph.D. (Pittsburgh).
Associate Professor, English.

NOGRADY, T., M.Sc., (Budapest), Ph.D. (Budapest).
Associate Professor, Chemistry.

NORRIS, J.N., B.Sc. (London), M.Sc. (London).
Lecturer, Business Administration.

NOWICKI, L.P., B.A. (Montclair State College, N.J.), M.A. (University of New York).
Assistant Professor, English.

O'BRIEN, E., S.J., B.A. (Montreal), Ph.L. (Regis), S.T.L. (Montreal), S.T.D. (Louvain)
Professor, Theological Studies and Director, Contemporary Theology Institute.

O'BRIEN, O., S.J., B.A. (Montreal), M.A. (St.Mary's), S.T.L. (Regis), S.T.D. (Woodstock).
Associate Professor and Chairman, Theological Studies.

O'BRIEN, John E., S.J., B.A. (Montreal), S.T.B. (St.Mary's), S.T.L. (Regis), Ph.D. (Southern California).
Associate Professor and Chairman, Communication Arts.

O'CONNOR, D., B.A. (Saint Louis University).
Lecturer, Philosophy.

O'CONNOR, R.E., S.J., B.A. (St.Mary's), M.A. (Toronto), S.T.L., Ph.D. (Harvard).
Professor, Mathematics.

OH, Ki Song, B.A. (Chuo College, Tokyo), L.L.B. (Tokyo), M.A. (Pennsylvania), Ph.D. (Pennsylvania).
Associate Professor, Political Science.

O'HANLEY, L.A., B.A. (St. Dunstan's University), L.Ph. Philosophy (College de L'Immaculée Conception), M.A. (Marquette University)
Lecturer, Philosophy

O'NEIL, P.E., B.A. (Toronto), M.A. (Toronto)
Lecturer, Philosophy.

ORR, J.E., M.Sc. (Berkeley), P.Eng.
Sessional Lecturer, Engineering.

OTTOLENGHI, Mrs. E., Certificat d'Etudes Francaises (Grenoble), Certificat de Cours de Professeurs de l'Ecole Pratique de l'Alliance Francaise (Paris), M.A. (Middlebury).
Assistant Professor, Modern Languages.

PALLEN, R., B.Sc., (Sir George Williams), M.Sc. (Western Ontario), Ph.D. (Western Ontario).
Assistant Professor, Chemistry.

PAPADANTONAKIS, C., B.A. (Princeton), M.A. (Cornell)
Assistant Professor, Economics.

PARIS, C., B.A., B.Th., S.T.L. (Laval), Diplômé I.S.P.C. (Paris) S.T.D. (Institut Catholique, Paris).
Assistant Professor, Theological Studies.

PARK, Miss D., B.A. (College of William and Mary), M.A. (McGill), Ph.D. (McGill)
Assistant Professor, Philosophy. (On leave).

PARR, A.R., B.Ed. (University of Alberta at Calgary), M.A. (University of Alberta at Calgary), Ph.D. (Ohio State).
Assistant Professor, Sociology. (On leave)

PHILMUS, Maria, B.A. (Brown University), Ph.D. (University of Ca'Foscari, Venice).
Assistant Professor, English.

PHILMUS, R.M., B.A. (Brown University), Ph.D. (University of California).
Assistant Professor, English.

POLLER, L., B.Sc., (Scranton), B.H.L., M.A. (Hebrew Union College).
Sessional Lecturer, Theological Studies.

PORTER, Robin, B.A. (McGill), M.A. (McGill).
Lecturer, History Department.

POTEET, Mrs. S. H., B.A. (Wellesley College), M.A. (Minnesota).
Lecturer, English.

PRESTON, Mrs. E., B.A. (Manchester), M.A. (McGill).
Assistant Professor, Classics.

PRILLO, A.J., B.Sc. (Montreal), M.A. (Toronto).
Associate Professor and Chairman, Mathematics.

RAHM, Miss L., A.B. (Washington)
Assistant Professor, English

REIDY, M., A.B. (Boston College), M.A. (Toronto), Ph.D. (Toronto).
Associate Professor, Philosophy.

RICHARDSON, G.P., B.Arch. (Toronto), B.D. (Knox College, Toronto), Ph.D. (Cambridge).
Assistant Professor, Theological Studies.

RIEGEL, M., L. ès L., C.A.P.E.S. (Strasbourg-Paris), Dipl. d'Et. Sup. (Strasbourg), Agrégé de l'Univ. (Paris).
Assistant Professor, French Studies.

ROUBEN, C., B.A. (Sir George Williams), L ès Sc. (Paris), M.A. (McGill)
Assistant Professor, French Studies.

RUSSO, R., B.A. (Columbia), M.A. (Cornell).
Assistant Professor, Classics.

SADAVA, S.W., B.A. (Carleton), Ph.D. (Colorado).
Assistant Professor, Psychology

SADI, W., B.A. (S.M.U.), J.D. (Chicago)
Lecturer, Political Science.

SAHNI, B.S., M.A. (Delhi) M.B.A. (New York University), Ph.D. (New School for Social Research).
Sessional Lecturer, Economics

SAVAGE, D., B.A. (McGill), Ph.D. (London)
Associate Professor, History; Director, Centre for African Studies.

SCHLACKS, C.H., B.A. (Detroit), M.A. (Michigan)
Assistant Professor, History

SCHEER, H., B.A. (Alberta), M.A. (Alberta)
Assistant Professor, Modern Languages

SCHOUTEN, Miss S., B.A. (Carleton), M.A. (Fairfield).
Sessional Lecturer, Communication Arts.

SHIN, J., B.S. (Swarthmore College), M.Sc. (Cornell).
Assistant Professor, Physics.

SMITH, R., B.A. (Montreal), M.A. (Toronto)
Lecturer, Mathematics.

SNIDER, Miss L., B.A. (Toronto), M.A. (Toronto).
Lecturer, Sociology and Communication Arts.

SORIC, J., B.Sc., (McMaster), M.Sc., (McMaster).
Assistant Professor, Mathematics.

SPICER, M., B.A. (Montreal), M.A. (Montreal).
Assistant Professor, Theological Studies.

SRIVASTAVA, T., B.Sc. (Lucknow), M.Sc. (Lucknow), Ph.D. (Gorakhpur, India).
Associate Professor, Mathematics.

STEFANOVIC, V., B.Eng. (Belgrade), M.Eng. (McGill), Dipl. Eng.
Assistant Professor, Engineering.

SUGDEN, L., B.A., B.Ed., M.A. (Manitoba), Doct. de l'Univ. (Nice).
Assistant Professor, French Studies. (On leave).

TAKAHASHI, A., B.A. (Maiji University, Tokyo), M.A. (Hawaii).
Assistant Professor, Economics.

TASCONE, J.F., B.A., M.A. (St. Bonaventure).
Associate Professor and Chairman, Sociology.

TITTLER, R., B.A. (Oberlin), M.A. (N.Y.U.)
Assistant Professor, History

TOUPIN, P., B.A. (Montreal), M.A. (Columbia), Doct. de l'Univ. (Aix-en-Provence)
Professor, French Studies. (Sabbatical).

TRAMONTANA, V., B.A. (New York State College), M.A. (State University of New York at Albany).
Sessional Lecturer, Sociology.

TRSIC, Mrs. M., B.A. (Belgrade), M.A. (Montreal).
Lecturer, Modern Languages.

TRUDEL, G., B.Sc. (McGill), Ph.D. (Leeds).
Associate Professor, Chemistry.

VALASKAKIS, Mrs. G., B.Sc., (Wisconsin), M.A. (Cornell)
Assistant Professor, Communication Arts.

VASILKIOTI, A., B.Comm., L.A. (McGill)
Assistant Professor, Accountancy.

VINCE, D., B.Sc. (Dalhousie), M.A. (Dalhousie)
Sessional Lecturer, Political Science.

VIPOND, M., B.A. (Queen's). M.A. (Toronto)
Lecturer, History.

WARDELL, H., S.J., B.A. (Montreal)
Assistant Professor, Engineering.

WARDY, Mrs. B., B.A. (McGill), M.A. (McGill).
Assistant Professor, Classics.

WAREHAM, R., B.A. (R.M.C.), M.A. (Michigan).
Assistant Professor, English

WATERS, Mrs. K., B.A. (McGill), M.A. (Oxford).
Assistant Professor, English.

WEBSTER, A.J., B.A. (St. Thomas, Denver), M.A. (St. Thomas, Denver).
Assistant Professor, Theological Studies.

WEDEMEYER, Miss E., B.A. (Wm. Smith College), L.M.S. (Inst. of Medieval Studies), Certificat d'Histoire de Moyen-Age (Grenoble)
Lecturer, History.

WESOLOWSKY, S., B.A. (Montreal), M.A. (Princeton)
Assistant Professor, Theological Studies.

WEST, D.C., B.Sc. (Acadia), B.A. (Acadia), M.A. (Toronto), Ph.D. (Toronto).
Associate Professor and Director, Computer Science.

WRIGHT, Mrs. B., B.A. (University of South Africa), M.A. (University of South Africa).
Assistant Professor, Economics.

YATES, Miss D., B.A. (Dalhousie), B.Ed. (Acadia), C.E.L. (University of Paris), M.A. (Montreal).
Lecturer, English.

YOUSSEF, Mrs. Z., L. ès L. (Lausanne), Brevet d'Apt. à l'Ens. Sec. (Canton de Vaud), Doct. de l'Univ. (Paris).
Assistant Professor, French Studies.

ZIENIUS, R., B.Sc., (McGill), Ph.D. (McGill)
Assistant Professor, Chemistry.

ZUCKERMANN, Dr. J., B.A. (Oxford), M.A. (Oxford), D.Phil. (Oxford).
Assistant Professor and Acting Chairman, English.

COMMITTEES OF SENATE

Note: The date assigned to each name is the retiring date. Where a date is not assigned the member belongs *ex officio* to the Committee.

Nominating Committee:

Fr. J. O'Brien, S.J.	Chairman
Prof. K. Waters	
Prof. J. Hanrahan	
Dean G. W. Joly	
Mr. D. Mooney	

The Committee on Academic Standing:

Prof. R. C. Moore	1971	Chairman
Dean L. M. Bessner		
Fr. R. Breen		
Dean A. Graham, S.J.		
Prof. J. Hanrahan	1971	
Dr. F. Hayes	1970	
Dr. C. Henkey	1970	
Dean G. W. Joly		
Mr. P. Lutfy	1970	
Miss E. McWeeny	1970	
Dr. J. J. Norris	1971	
Dr. A. Newell	1970	
Mr. J. Noonan		
Dr. J. E. O'Brien, S.J.		
Mr. D. Potvin		
Dr. R. Zienius	1972	

The Committee on Admissions:

Mr. W. Cozens		Chairman
Mr. M. Allen		
Dean L. M. Bessner		
Fr. R. Breen		
Prof. L. Boyle	1971	
Dr. D. Brown	1972	
Dr. C. Fonda	1972	
Dean A. Graham, S.J.		
Prof. C. Hewson	1970	
Dean G. W. Joly		
Dr. J. Lavery	1971	
Miss M. McLean	1970	
Mr. B. Mikulin	1970	
Mr. J. Noonan		
Mr. D. Potvin		
Dr. G. Trudel	1970	

Library Board:

Prof. T. McPhail	1972	Chairman
Mr. R. Caden	1970	
Prof. C. Goldman	1970	
Mr. P. Mackey	1970	
Prof. R. Martin	1971	
Mr. M. Massie	1970	

Dr. V. McNamara	1972
Dr. T. Nogrady	1972
Prof. C. Papadantonakis	1971
Mr. J. Princz	
Prof. H. Ripstein	1970
Prof. T. Srivastava	1970
Mr. G. Trowsdale	
Prof. J. Tascone	1970

Scholarship Committee:

Prof. J. Soric	1972	Chairman
Mr. W. Cozens		
Mr. R. Duder	1972	
Prof. H. English	1972	
Mr. S. Fabiszewski	1970	
Prof. H. Lau	1971	
Mrs. F. Haffey		
Mr. T. Murphy		
Miss T. Rabzel	1970	
Dean R. Shearer		
Prof. A. Vasilkioti	1971	

Faculty Representatives on the Student Life Committee:

Dr. R. Hinners	1971
Prof. E. Mouledoux	1972
Prof. H. Ripstein	1970

Budget Committee:

Dean L. M. Bessner	Chairman
Mr. Paul Brennan	
Prof. J. T. Copp	
Dr. K. Ekler	
Dean G. Joly	
Dr. V. McNamara	
Mr. D. Russel	
Prof. J. Tascone	
Prof. K. Waters	

Sub-Committee on the Scheduling of Lectures and Examinations:

Mr. J. W. Noonan		Chairman
Prof. W. Bannister	1971	
Prof. J. P. Doyle	1970	
Mr. T. Murphy		
Mr. T. Pye		
Dr. D. West	1972	Secretary

Committee on Prospectus:

Mr. T. Murphy		Chairman
Mr. D. Barker	1970	
Prof. H. Dauderis	1971	
Mr. P. Lonergan	1970	
Prof. S. Neilson	1971	
Prof. K. Waters	1970	

Committee on Visiting Lecturers, Special Speakers, Etc.:

Mr. R. Duder	1972	Chairman
Prof. E. Egan	1972	
Dr. F. Hayes	1971	
Dr. G. Laurion	1972	
Dr. D. McDougall	1970	
Dr. G. O'Brien, S.J.	1972	
Dr. R. H. Pallen	1970	
Prof. L. Snider	1971	
Prof. G. Valaskakis	1972	
Prof. K. Waters	1970	

Evening Division Committee:

Mr. D. Potvin		Chairman
Dr. G. Adams	1971	
Prof. G. Gross	1972	
Prof. A. Lallier	1972	
Prof. D. MacDonald	1970	
Dr. D. McElcheran	1971	
Prof. D. McPhillips	1972	
Mr. J. Noonan		
Prof. C. Rouben	1970	

The Sub-Committee on Graduate Awards and Programs:

Dr. S. Alvi	1972	Chairman
Mr. P. Brennan	1970	
Mr. W. Cozens		Executive Secretary
Prof. P. Jones	1971	
Mr. P. Kierans	1970	

Curriculum Committee:

Dr. J. Morgan	1971	Chairman
Dr. G. Adams	1972	Vice-Chairman
Dean L. M. Bessner		
Fr. R. Breen		
Mr. Robert Desrosiers	1970	
Dr. G. Dewey	1972	
Mr. L. Filippelli	1970	
Dean A. Graham, S.J.		
Dean G. W. Joly		
Prof. P. Kawaja	1970	
Prof. S. Kubina	1971	
Dr. D. J. McDougall	1970	
Dr. J. O'Brien		
Mr. John Sizgoric		
Mr. D. Potvin		
Dr. S. Russel	1972	
Prof. J. Soric	1971	
Dr. L. Sugden	1972	
Mr. J. Supple	1970	
Prof. A. Webster	1971	

HISTORY OF LOYOLA COLLEGE

The origins of Loyola College may be traced to the opening of the Collège Ste-Marie in 1848, which resumed in Montreal the work of the historic Jesuit College of Quebec, opened in 1635. From its very first days the classical course at the College began with both languages, French and English, on an equal footing. From 1888 to 1896 the classical course in English was operated as distinct from that in French, both being considered separate units within one institution.

On September 2, 1896, Loyola College was opened at 2084 St. Catherine Street West, but only on February 2, 1899 was Loyola College incorporated by an Act of the Quebec Legislature. It had its origin in the separate course, inaugurated ten years earlier, for the English-speaking students at Collège Ste-Marie. On February 5, 1899, Laval University officially extended its Bachelor of Arts degree to Loyola students under the special privileges granted by the Holy See in its Constitution Jamdudum, and the first degrees were awarded by Laval in 1903. A similar arrangement was made with the University of Montreal when it was established. As a result of these arrangements, Loyola was assured of complete autonomy and independence in the shaping of its curriculum and in the conducting of its examinations in Arts courses, degrees being granted by the University of Montreal.

Loyola instituted its Faculty of Science in 1943 and its Faculty of Commerce in 1948. All courses in the three faculties are conducted at the College and by special arrangement the University of Montreal grants B.Sc. and B.Comm. degrees to students who have successfully completed their courses in these faculties. The curriculum and examinations in these courses are, however, under the control of the University. Since the early days of Loyola, many changes have occurred, especially in the evolution of curriculum, which more and more set the College in the Anglo-Canadian tradition. For instance, the eight-year course was broken up into two distinct four-year units (1919) and options were introduced (1921), confirming three distinct courses, at least in the last two years of college, Arts (General), Arts (Pre-Medical), Arts (Pre-Science). In 1943 other changes were initiated which transformed Loyola into the developed academic institution it is today. A distinct Faculty of Science was established, offering Honours Chemistry and Honours Physics; the first three years of Engineering were introduced in Civil, Mechanical, Mining, Chemical, and Metallurgical Engineering; major fields in Economics, English and History were established in 1953 and in Theology in 1962. Honours Courses in Economics, English and History were initiated in 1958 and in Theology in 1963. An Extension Department, since renamed the Evening Division, and a Summer School were founded in 1957 to fill the need of those unable to pursue their studies during the day and thus provide a public service.

The academic world soon recognized the new status of Loyola: the Chemical Institute of Canada (CIC) approved the Honours Chemistry programme as fulfilling all the requirements for professional standing in its Institute, the Engineering Institute of Canada (EIC) recognized the competence of the Loyola Engineering Department; the Institute of Chartered Accountants of Quebec accepted the work done in the Commerce course, a major in Accountancy, and granted the same privileges to Loyola graduates as were conferred on graduates of other older institutions; the National Conference of Canadian Universities and Colleges (now the Association of Universities and Colleges of Canada) accepted Loyola as an autonomous member. All faculties of the College have prepared students for, and have sent them to, the graduate schools of American, British and Canadian universities, which have conferred Engineering, Master's and Doctoral degrees on them.

The growth of Loyola has brought with it noticeable change; for example, there are now four faculties and twenty-one departments; the number of lay

members of the staff has increased very greatly; and there has been an ambitious building programme established to provide the necessary physical facilities.

The rising importance of the Extension Department and the Summer School necessitated a revaluation of the programme, in the course of which the Extension Department was renamed the Evening Division of Loyola College and became more closely integrated with the Day Division of the College. The Summer School has retained its basic structure, but day courses were offered for the first time during the summer of 1964.

Further information about the work of these two divisions may be obtained from the Director of the Evening Division.

AIM OF LOYOLA COLLEGE

The aim of Loyola College has been well stated by John Henry Cardinal Newman in a sermon preached in the University Church at Dublin entitled "Intellect, the Instrument of Religious Training" in which he states ". . . I wish the intellect to range with the utmost freedom, and religion to enjoy an equal freedom, but what I am stipulating for is, that they should be found in one and the same place (i.e., religion and science) and exemplified in the same persons . . . wish the same spots and the same individuals to be at once oracles of philosophy and shrines of devotion.

It will not satisfy me, what satisfied so many, to have two independent systems, intellectual and religious, going at once, side by side, by a sort of division of labour and only accidentally brought together. It will not satisfy me, if religion is here and science there, and young men converse with science all day, and lodge with religion in the evening. It is not touching the evil, to which these remarks have been directed, if young men eat, and drink and sleep in one place, and think in another. I want the same roof to contain both the intellectual and moral discipline.

Devotion is not a sort of finish given to the sciences; nor is science a sort of feather in the cap, if I may so express myself, an ornament and set-off to devotion. I want the intellectual layman to be religious, and the devout ecclesiastic to be intellectual . . .

Sanctity has its influence; intellect has its influence; the influence of sanctity is the greater on the long run; the influence of intellect is greater at the moment. Therefore in the case of the young, whose education lasts a few years, where the intellect is, there is the influence. Their literary, their scientific teachers, really have the forming of them . . ."

This is Loyola's reason for existence; this is Loyola's aim.

ADMISSIONS REGULATIONS FOR THE PRESENT 4 YEAR UNIVERSITY PROGRAMME

Because there will not be a first year University Programme offered this year, the only students who may be admitted for the 1970-71 academic year will be those who have completed at least one university year elsewhere, and apply for transfer to Loyola. Students in this category will require, along with the normal documentation, a letter from the Registrar or other responsible authority at the last institution attended, indicating honourable dismissal and permission to enter at that institution for the same session, faculty and year for which application is being made at Loyola College.

In these years of transition from a four to a five year programme it is no doubt most confusing, particularly for a student from out of the Province of Quebec. Students, therefore, who are considering transfer to Loyola should write to the Admission Office, or directly to the Dean of the faculty concerned for clarification of their particular status.

The student applying to take his final (4th) year may be precluded from doing so because he would normally not satisfy the two year residence requirement.

GUIDANCE CENTRE

Loyola has always been interested in the all-round development of its students. Counselling has played an important role in this respect. Increased registration and more diversified student needs prompted Loyola to open a Guidance Centre in September 1965 to supplement other forms of Counselling.

Specifically the Guidance Centre is prepared to help all students in the following areas: (1) Educational Problems (2) Vocational Problems (3) Personal Problems (4) Psychological Testing (5) Effective Reading.

The Guidance Centre is in the Centennial Building at 6935 Sherbrooke Street W. It was established to help students with *any* problem that they may have. All are invited to use the Centre's facilities.

ACADEMIC REGULATIONS

The following applies to students registered in third and fourth years in the 1970-71 academic year. There will be no second year in 1970-71.

Length of Programmes

Students who have entered with Junior Matriculation standing will normally require four calendar years to obtain a Bachelor's degree.

A student may reduce the number of calendar years required for a degree by taking courses in Summer Sessions and carrying one course in excess of the normal year's load.

NOTE: Such acceleration requiring the prior approval of Chairman and Dean, will not be allowed until completion of 2nd year, and only if the student has obtained much better than average standing in 2nd year (70%).

WARNING: No credit will be granted for Summer Session courses taken without the required approval of Chairman and Dean, nor will the grades for such courses appear on the student's transcript.

YEAR'S LOAD: The normal course load for each year is indicated in departmental programmes.

Registration

Students must register annually at the times specified in the Academic Calendar (CF front of this book).

All students register according to year, faculty, department and courses.

NOTE: A SPECIAL FEE IS CHARGED FOR LATE REGISTRATION: $10.00 for the first day and $3.00 for each succeeding day.

Some Specific Conditions:

a) A student may register for 3rd year only if he has obtained complete standing in 1st year.

b) A student may register for 4th year only if he has obtained complete standing in 2nd year.

c) A student may register for advanced courses only if he has successfully completed prerequisite courses.

d) A student may transfer to another department or faculty only if he has completed the proper forms.

Change of Registration

During a short period following registration (the date is specified in the Academic Calendar), a student may drop a course, with or without substituting another one, but only if his chairman recommends it, his Dean approves it, and the Registar and instructor concerned are informed.

Some Special Purpose Categories:

A) For Government purposes and Bursar's Office:

1. FULL-TIME STUDENTS: full-time students are students registered for four or more full courses.

2. PART-TIME STUDENTS: part-time students are students registered for less than four full courses.

B) For Registrar and Deans:

1. DEGREE CANDIDATES: Degree Candidates are students proceeding to a degree.

2. SPECIAL STUDENTS: Special Students are students full or part-time, not proceeding to a degree.

Graduation Registration

Fourth year students must, before February 2nd, make special application for their degrees, on forms provided by the Records Office.

Exchange Students

A student may study for one year (2nd or 3rd NOT 4th) at another university and have his work credited towards his degree provided that his Chairman and Dean have given prior approval.

Term Work

Term work includes written assignments, class, seminar and tutorial participation, work done in laboratory periods, and term tests and quizzes.

The grade-value of term work in any course can be up to 70%. Professors will make known to their students early in the term the grade value ratio of term work to final examination.

Students are expected to attend all lectures, seminars, tutorials and laboratory periods for which they are registered.

The penalty for plagiarizing is, of course, severe. The minimum penalty is zero for the assignment. Severer penalties may be recommended by professors.

Students should consult the *Loyola Style Manual* for the official description of plagiarism, and the Students' Academic Committee for details regarding their right to appeal.

Formal Examinations

All students must submit to formal "Final" examinations in all courses.

At apt times the Registrar will post the "Examination Regulations".

Cheating: The penalty for cheating is, of course, severe. The minimum penalty is zero for the examination or test. Severer penalties may be recommended. Students should consult the Students' Academic Committee for details regarding their right to appeal.

Grading Scale

The grading scale both for individual courses and the year's average is as follows:

"A"	First Class Honours	80% and up
"B"	Second Class Honours	65% to 79%
"C"	Third Class	55% to 64%
"D"	Pass	50% to 54%
"F"	Failure	00 to 49%

Cum Laude

The Bachelor's Degree is granted according to these traditional categories:

Cum laude	to students with a four year average of between 70% and 79%.
Magna cum laude	to students with a four year average of between 80% and 89%.
Summa cum laude	to students with a four year average of 90% or over.

Academic Status

A student's academic status is determined in May and is based on all the courses for which he is registered.

A student is Clearly PROMOTED if he has failed no courses and has an average of 50% or better in Arts, Commerce and Science, and 60% in Engineering.

A student has Clearly FAILED

          a) if his average is less than 50%

OR   b) if he has failed more than two full courses.

A Clearly FAILED student will be allowed to repeat his year, upon request, if:

          a) his average is not less than 35%

and   b) he has not previously failed a year.

A FAILED student who does not satisfy these conditions MUST WITHDRAW.

A repeating student who is not CLEARLY PROMOTED in September MUST WITHDRAW.

The academic status of a student who is not clearly promoted, and has not clearly failed will be determined by his Dean in consultation with the student's department Chairman.

Reports

Official reports will be issued in May for all students.

Official May reports must be retained and presented at registration.

Recognition of Student Rights

If sickness, or death in the family, prevents a student from writing final examinations he should apply to the Academic Standing Committee for aegrotat standing, or permission to write special examinations.

The application plus relevant documents should be submitted to the Registrar not later than one week following the examinations.

A student may appeal a punitive decision for alleged plagiarism or cheating. He should consult the Students' Academic Committee for procedures.

A student may appeal against what he considers unfair and unprofessional treatment by a professor or Dean. He should consult the Students' Academic Committee for procedures.

A student may, if he thinks that some factor affecting his grades was not considered by the examiner, appeal to have his paper reread. The appeal should be made in writing to the Registrar not later than two weeks after the publication of reports. A fee of $10.00 is payable to the Registrar for re-reading.

FACULTY OF ARTS

Students admitted to Arts follow General and Honours programmes of twenty-one courses for four years.

An Honours student, one who welcomes the opportunity for deeper and more intensive study, with an eye, perhaps, to post-graduate studies, will choose (subject to departmental approval) from: Classics, Economics, English, French Studies, History, Philosophy, Political Science, Theology.

A General Arts student will choose a field of concentration ("major") from: Classics, Communication Arts, Economics, English, French, German, History, Modern Languages, Philosophy, Political Science, Psychology, Sociology, Spanish, Theology. The field of concentration is normally chosen at the end of the first year.

Of special interest is the pilot programme of "related courses" that will enable a General Arts student to proceed to a degree by substituting for a "major" a cluster of related courses. Students wishing to follow this programme should consult the Chairman of the Department of Interdisciplinary Studies.

A chosen filed of concentration or an honours programme may dictate the electives to be taken in Collegial I and II. Students should consult with the department of their choice during the period of academic counselling preceding registration.

The Curriculum Committee accepts the principle of the Double Major which will normally consist of a minimum of 5 approved courses in each of the disciplines in addition to the University-wide requirements; and the following particular double majors have been approved:

1. French Studies and Spanish

2. French Studies and Italian

3. French Studies and Russian

4. Spanish and Italian

5. Spanish and Russian

6. Russian and Italian

7. Economics and Modern Languages

8. Economics and Theology

9. History and Philosophy;

and students are encouraged to develop additional double majors with the approval of both departments involved.

PROGRAMMES OF STUDIES AVAILABLE – FACULTY OF ARTS

The following is a matrix of course requirements (number of courses) by programme type (Majors, Joint Majors, Honours) and subject area.

Subject	MAJORS															JOINT MAJORS			HONOURS							
	Classics	Comm. Arts	Economics	English	French	German	History	Italian	Modern Lang.	Philosophy	Pol. Sci.	Psychology	Sociology	Spanish	Theology	Pol.Sci. & Econ.	Econ./Mod.Lang.	French/Mod.Lang.	Classics	Economics	English	French	History	Philosophy	Pol. Sci.	Theology
Classics	[8]	2	2	2	2			2	2	2	2	2	2	2	2	2	2	2	[11]		2			2		2
Communication Arts	[7]	2																								
Economics	2	[8]	2	2					2	2	2	2	2	2		[4]	[5]			[9]					1	
English	2	[7]	2	2					2	2	2	2	2	2		2	2	2	1	1	[9]	1	1	1	1	1
French	2	[8]	2	2					2	2	2	2	2	2		2	2	[6]	2	1	1	[11]	1	1	1	2
German	[7]																									
History	[6]																		10				10			
Italian	[7]																									
Mathematics			1																							
Modern Languages	[10]															[5]	[6]									
Philosophy	2	2	2	2	2			2	2	[6]	2	2	2	2	4	2	2	2						10		3
Political Science	2	2	2	2	2			2	2	2	[7]	2	2	2	2	[5]									[9]	
Psychology	2											[6]														
Sociology	2												[7]													
Spanish	2													[7]												
Theology	2	2	2	2	2			2	2	2	2	2	2	2	[7]	2	2	2	2	2	2	2	2	2	2	10
Electives	6	4	2	6	5	4	5	4	1	7	4	4	4	4	4	2	1	1	4	3	5	4	4	4	4	3
Required Courses	22	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	22	21	21	21	21	21	21	21

2Second year French may be replaced by Language elective.

BACHELOR OF ARTS PROGRAMMES

HONOURS

YEAR	CLASSICS	ECONOMICS	ENGLISH	FRENCH
FIRST	DISCONTINUED			
SECOND*	Greek Latin (2) French Philosophy Elective	Economics 260 Economics 271 French Philosophy Theology Elective	Classics or English 680 or 590 English (the equivalent of two full courses from 610, 613, 620, 633, 643, 653, 673, 674) Philosophy Electives (2)	French 232 French (the equivalent of one full course from the list of Honours and Majors courses, except 428, 432, 434, 440) Philosophy Theology Electives (2)
THIRD	Greek (2) Latin Ancient History Philosophy Theology	Economics 354 Economics 366 Econ. Elective Philosophy Theology	English (the equivalent of three full courses from the list of Honours and Major courses) Philosophy Elective	French (the equivalent of four full courses from the list of Honours and Majors courses) Philosophy
FOURTH	Greek Honours Tutorial Latin Honours Tutorial Prose Composition Theology Elective	Economics 461 or 464 or 480 Econ. Electives (2) Electives (2)	English (the equivalent of three full courses from the list of Honours and Majors courses) Theology Elective	French 428 (if not yet taken) French (the equivalent of two full courses from the list of Honours and Majors courses) French 500 Theology

*Not offered 1970-71.

BACHELOR OF ARTS PROGRAMMES

HONOURS				
YEAR	HISTORY	PHILOSOPHY	POLITICAL SCIENCE	THEOLOGY
FIRST	DISCONTINUED			
SECOND*	History (three Electives from General courses) Philosophy Theology	Classics 112 or 202 or 212 or 221 Language Philosophy 200 History of Phil. Theology Elective	Economics 100 Philosophy Poli. Sci. 500 Poli. Sci. 595H Theology Elective	Classics 112 or 202 or 212 or 221 French Philosophy Theology Electives (3)
THIRD	Honours History Tutorial History (two Electives from Honours courses) Philosophy Elective	History of Phil. Philosophy Seminar Philosophy Elective Theology Elective	Philosophy Poli. Sci. Electives (3) Elective	Philosophy Social Science Theology Electives (3)
FOURTH	Honours History Tutorial History (two Electives from Honours courses) Theology Elective	History of Phil. Philosophy Seminar Philosophy Electives (2) Elective	Poli. Sci. 795H Poli. Sci. Electives (3) Theology	Philosophy Theology Electives (3) Elective

*Not offered 1970-71.

BACHELOR OF ARTS PROGRAMMES

MAJORS				
YEAR	CLASSICS	COMMUNICATION ARTS	ECONOMICS	ENGLISH
FIRST	DISCONTINUED			
SECOND*	Classics (2) English French Philosophy Theology	Classics Comm. Arts 200-205 English French Philosophy Elective Theology	Classics 112 or 202 or 212 or 221 Economics 210 Economics 221 or 202 French Philosophy Theology	Classics English (the equivalent of two full courses from 610, 613, 620, 633, 643, 653, 673, 674) French Philosophy Elective
THIRD	Classics (3) Theology Electives (2)	Comm. Arts Electives (3) Philosophy Elective	Economics 304 Economics 306 English Philosophy Theology	English (the equivalent of two full courses from the list of Honours and Majors courses) Philosophy Electives (2)
FOURTH	Classics (2) Philosophy Electives (2)	Comm. Arts Electives (3) Theology or Comm. Arts 450 Elective	Econ. Electives (3) Electives (2)	English (the equivalent of two full courses from the list of Honours and Majors courses) Theology Electives (2)

*Not offered 1970-71.

BACHELOR OF ARTS PROGRAMMES

	MAJORS				
YEAR	FRENCH	GERMAN	HISTORY	ITALIAN	MODERN LANGUAGES
FIRST	DISCONTINUED				
SECOND*	Classics English French 232 French (the equivalent of one full course from the Honours and Majors courses, except 428, 432, 434, 440) Philosophy Theology	Classics 112 or 202 or 212 or 221 English French 220, 224, 228, 230-240, 250 or 260 German 200 Philosophy Theology or Elective	Classics 112 or 202 or 212 or 221 French History (two Electives from General courses) Philosophy Theology	Classics 112 or 202 or 212 or 221 English French 220, 224, 228, 230-240, 250 or 260 Italian 200 Philosophy Theology or Elective	English French 224, 228, 230-240, 250 or 260 History Mod. Lang. (two Electives from: German 200, Italian 200, or Spanish 200) Philosophy
THIRD	French (the equivalent of two full courses from the Honours or Majors courses) Philosophy Electives (2)	German (two Electives from 300s, 400s, 500s) Philosophy Theology Elective	English History (two Electives from General or Honours courses) Philosophy Elective	Italian (two Electives from 300s, 400s, 500s) Philosophy Theology Elective	Mod. Lang. (three Electives from the 300s in German, Italian, or Spanish) Philosophy Theology
FOURTH	French (the equivalent of three full courses from the Honours and Majors courses; French 428 is strongly recommended) Theology Elective	German (three Electives from 300s, 400s, 500s) Theology Elective	History (two Electives from General or Honours courses) Theology Electives (2)	Italian (three Electives from 300s, 400s, 500s) Theology Elective	Mod. Lang. (two Electives from the 300s or 400s in German, Italian or Spanish) Theology Elective in one of the two major Modern Languages

*Not offered 1970-71.

BACHELOR OF ARTS PROGRAMMES

	MAJORS			
YEAR	PHILOSOPHY	POLITICAL SCIENCE	PSYCHOLOGY	SOCIOLOGY
FIRST	DISCONTINUED			
SECOND*	Classics 112 or 202 or 212 or 221 English French History of Phil. Philosophy 200 Theology	Classics 112 or 202 or 212 or 221 English French Philosophy 200 Poli. Sci. 500 Theology	Classics 112 or 202 or 212 or 221 French Philosophy Psychology 201 Statistics 202 Theology	Classics English French Sociology 200 Sociology 201 or 203 or 205 Sociology 202 or 204 or 206
THIRD	History of Phil. Philosophy Seminar Theology Electives (2)	Philosophy Poli. Sci. Electives (3) Elective	Psychology 305 Theology Electives (3)	Philosophy Sociology 300 Sociology 350 Sociology Elective Elective Theology
FOURTH	History of Phil. Philosophy Seminar Electives (3)	Poli. Sci. Electives (3) Theology Elective	English Philosophy Electives (3)	Philosophy Sociology 400 Electives (3)

*Not offered 1970-71.

BACHELOR OF ARTS PROGRAMMES

	MAJORS		JOINT MAJORS		
YEAR	SPANISH	THEOLOGY	POLITICAL SCIENCE AND ECONOMICS	MODERN LANGUAGES AND ECONOMICS	MODERN LANGUAGES AND FRENCH
FIRST	DISCONTINUED				
SECOND*	Classics 112 or 202 or 212 or 221 English French 220, 224, 228, 230-240, 250 or 260 Philosophy Spanish 200 Theology or Elective	Classics 112 or 202 or 212 or 221 English French Philosophy Theology Electives (2)	Classics Economics 210 Economics 221 or Elective French Political Science Philosophy	Not offered 1970-71	Not offered 1970-71
THIRD	Philosophy Spanish (two Electives from 300s, 400s, 500s) Theology Elective	Philosophy Social Science Electives (2) Theology Electives (2)	Economics English Political Science (2) Theology	Economics (2) Language (1) Philosophy Theology	Philosophy Theology French (2) [from the List of Honours — Major Courses] Language (2)
FOURTH	Spanish (three Electives from 300s, 400s, 500s) Theology Elective	Philosophy (2) Social Science Elective Theology Electives (2)	Economics Political Science (2) Philosophy Theology	Economics (1) Language (2) Philosophy Theology	Theology French (2) [from the List of Honours — Major Courses] Language (2)

*Not offered 1970-71.

FACULTY OF COMMERCE

A Bachelor of Commerce degree has been available from Loyola since 1948. Initially offering studies with emphasis on Economics and Accountancy, it now includes the general area of Business Administration. Despite the requirement that students specialize in one of these three fields, the degree offers a broad education in the humanities.

Students in the Honours programme (Economics only) must maintain a yearly average of 65%, and not less than 65% in any course in their field of concentration. All candidates must have a minimum of twenty-two recognized academic credits to receive the degree. To graduate with a Bachelor of Commerce (Major) degree (in Economics, Accountancy and Business Administration), a student must satisfy the ordinary requirements for the degree *and* obtain an average of 65% for the courses in his chosen discipline taken in second, third and fourth year. If a student fails to satisfy the specified average he will graduate with a *general* Bachelor of Commerce degree. Furthermore if a student fails any one of the courses in his chosen discipline, he will graduate with a general degree.

The requirements for graduation with a major will apply to Third and Fourth year courses for the class of 1971 and to Second, Third and Fourth Year courses for classes subsequent to 1971.

THE BACHELOR OF COMMERCE PROGRAMMES

YEAR	MAJORS			HONOURS
	ACCOUNTANCY	BUSINESS ADMINISTRATION	ECONOMICS	ECONOMICS
FIRST	DISCONTINUED			
SECOND*	Accounting 205 Business 204-215 Business 207 French Philosophy Theology	Accounting 205 Business 204-215 Business 207 French Philosophy Theology	Accounting 205 Economics 210 Economics 221 or 202 French Philosophy Elective	Economics 260 Economics 271 French Philosophy Electives (2)
THIRD	Accounting 306 Business 301 Business 308 English Elective	Business 301 Business 306 Business 308 Business 320 English	Economics 354 Economics 306 English Philosophy Theology	Economics 304 Economics 366 Economics Elective Philosophy Theology
FOURTH	Accounting 403-404 Accounting 413 Business 402 Philosophy Theology Elective	Business Elective Philosophy Theology Electives (3)	Economics Electives (3) Electives (2)	Economics 461 or 464 or 480 Economics Electives (2) Electives (2)

*Not offered 1970-71.

FACULTY OF ENGINEERING

The overall objectives of the Faculty of Engineering are the growth and development of the student into a self-identifiable person and the acquisition by him of the knowledge upon which to build his career. In the concrete, these goals are proposed to the student as a personal search for excellence and the forming of himself to manage industry, whether technically or administratively. While the subjects of the curriculum — technology, science, humanities, professional practice — have to be presented as discrete disciplines, the Faculty seeks at all times to make the student aware that he must integrate them into his personality so that they become the foundation for supporting his chief function in society — the making of decisions.

FACULTY OF SCIENCE

Beginning with the academic year 1969-70, the Collegial program (CEGEP-parallel) was introduced at Loyola. The courses for the two year program will be found in the Collegial Calendar.

In 1970-71, because of the introduction of the second collegial year, the former second year college program will be discontinued. Note, however, that many courses designated as "Second Year" in previous catalogues will be given in 1970-71 because they are required by third year students. The first year of the new three-year university program will begin in 1971-72.

During the academic year 1970-71, the programs for students registering for second year in or before September 1969 will continue as previously. They are as follows:

1. A B.Sc. program, designated a general course with concentration, designed for students who do not plan to continue their scientific training beyond the Bachelor Level. Offered by chemistry, geotechnical science, mathematics and physics.

2. A major program leading to a B.Sc. with greater concentration in the chosen field. Designed for students capable and willing to concentrate in a designated area, and who may, perhaps with the help of a qualifying year after graduation, continue to higher degrees. Offered in biology, chemistry, geotechnical science, mathematics, physics and psychology.

3. An honours program offered in the chemistry, mathematics and physics departments. Those completing this exacting program usually proceed to graduate school and advanced degrees.

Honours students must maintain a yearly average that does not drop below 65% and obtain not less than 65% in each course of their field of concentration.

It should be noted (a) that the student load in the above programs varies in quantity rather than quality, (b) the programs have been arranged with increasing work loads to permit students to obtain good marks in the courses in which they are registered; failure to maintain a satisfactory standard will result in the student being asked to drop to a less concentrated program, (c) each department is responsible for deciding the category which a student may enter and in which he may continue; no student may claim a right to proceed in a program against the judgment of the department concerned.

THE BACHELOR OF SCIENCE PROGRAMMES

	HONOURS		
YEAR	**CHEMISTRY**	**MATHEMATICS**	**PHYSICS**
FIRST	DISCONTINUED		
SECOND*	Chemistry 211 Chemistry 212 Chemistry 221 Chemistry 222 Chemistry 231 Mathematics 232 Philosophy Theology	Mathematics 220 Mathematics 231 Mathematics 201 or 240 Mathematics 234 Philosophy Physics 205	Mathematics 231 Mathematics 234 Philosophy Physics 205 Physics 220 Physics 301 Physics 309
THIRD	Chemistry 313 Chemistry 323 Chemistry 324 Chemistry 332 Chemistry 333 Chemistry 334 English Mathematics 332 Philosophy Physics 205 (Theory)	Mathematics 320 Mathematics 321 Mathematics 330 Philosophy Physics 311 Theology	Philosophy Physics 306 Physics 307 Physics 310 Physics 320 Physics 304 Physics 305 Theology

FOURTH	Chemistry 425
	Chemistry 426
	Chemistry 435
	Chemistry 436
	Chemistry 437
	Chemistry 450
	Philosophy
	  or Theology
		English
		Mathematics 460
		Mathematics 430
		Mathematics 490
		One or two from:
		  Mathematics 401, 440,
		  421, 470-471, 480
		Philosophy
		  or Theology
			English
			Physics 403
			Physics 404
			Physics 408
			Physics 411
			Physics 410
			Philosophy
			  or Theology

THE BACHELOR OF SCIENCE PROGRAMMES

	MAJORS		
YEAR	**BIOLOGY-CHEMISTRY**	**CHEMISTRY**	**GEOTECHNICAL SCIENCE**
FIRST	DISCONTINUED		
SECOND*	Biology 202 Chemistry 212 Chemistry 221 Chemistry 222 Philosophy Theology	Chemistry 212 Chemistry 221 Chemistry 222 Chemistry 231 Mathematics 232 Philosophy Theology	Chemistry 211 Chemistry 212 Geot. Sci. 203 Geot. Sci. 205 Geot. Sci. 206 Geot. Sci. 207 Geot. Sci. 208 Geot. Sci. 209 Mathematics 202 Philosophy Theology
THIRD	Biology 304 Biology 305 Chemistry 323 Chemistry 324 Mathematics 202 Philosophy	Chemistry 211 Chemistry 313 Chemistry 323 Chemistry 324 Chemistry 334 English Philosophy	Chemistry 231 Engineering 802 Geot. Sci. 301 Geot. Sci. 302 Geot. Sci. 303 Geot. Sci. 304 Geot. Sci. 305 Geot. Sci. 306 Philosophy Physics 206

FOURTH	Biology 406
	Biology 408
	English
	Philosophy
	  or Theology
	Two Electives
		Chemistry 332
		Chemistry 333
		Chemistry 425
		Chemistry 426
		Philosophy
		  or Theology
			Geot. Sci. 401
			Geot. Sci. 402
			Geot. Sci. 403
			Geot. Sci. 404
			Geot. Sci. 405
			Geot. Sci. 406
			Geot. Sci. 408
			Philosophy
			  or Theology

*Not offered 1970-71.

THE BACHELOR OF SCIENCE PROGRAMMES

	MAJORS		
YEAR	**MATHEMATICS**	**PHYSICS**	**PSYCHOLOGY**
FIRST	DISCONTINUED		

SECOND*	Mathematics 221
	Mathematics 232
	One from:
	  Mathematics 201
	  Mathematics 240
	Philosophy
	Physics 205
	Theology
		Mathematics 231
		Mathematics 234
		Philosophy
		Physics 205
		Physics 220
		Physics 301
		Physics 309
			Statistics 202
			Chemistry 221
			Chemistry 222
			English
			Philosophy
			Psychology 201
			Theology

THIRD	Mathematics 234 Mathematics 331 Mathematics 320 Philosophy Physics 311	Philosophy Physics 302 Physics 304 Physics 307 Physics 320 Theology	Biology 331 Philosophy Psychology 305 Two Electives

FOURTH	English
	Mathematics 321
	Mathematics 330
	Mathematics 490
	One from:
	  Mathematics 401, 440,
	  460, 470-471, 480
	Philosophy or Theology
		English
		Physics 306
		Physics 310
		Physics 403
		Philosophy or Theology
			Philosophy or Theology
			Psychology 401
			Three Electives

THE BACHELOR OF SCIENCE PROGRAMMES

	GENERAL			
YEAR	**CHEMISTRY**	**GEOTECHNICAL SCIENCE**	**MATHEMATICS**	**PHYSICS**
FIRST	DISCONTINUED			

SECOND*	Chemistry 212
	Chemistry 221
	Mathematics 232
	Philosophy
	Theology
		Chemistry 211
		Chemistry 212
		Geot. Sci. 203
		Geot. Sci. 205
		Geot. Sci. 208
		Geot. Sci. 209
		Mathematics 202
		Philosophy
		Theology
			Mathematics 221
			Mathematics 232
			Philosophy
			Theology
			One Elective
				Mathematic 232
				Philosophy
				Physics 201
				Physics 205
				One Elective
				  from:
				  Biology
				  Chemistry 231
				  Geot. Sci.

THIRD	Chemistry 231 Chemistry 222 Chemistry 314 English Philosophy One Elective	Chemistry 231 Geot. Sci. 301 Geot. Sci. 302 Geot. Sci. 303 Geot. Sci. 403 Philosophy Sc. Elective (1)	English Mathematics 201 Mathematics 234 Mathematics 240 Philosophy	Philosophy Physics 307 Physics 311 Sc. Elective (1) Theology

FOURTH	Chemistry 313
	Chemistry 324
	Philosophy
	  or Theology
	One Elective
		English
		Geot. Sci. 404
		and either
		  (a), (b) or (c)
		(a) Geot. Sci. 405
		    Sc. Elective (1)
		(b) Geot. Sci. 401
		    Geot. Sci. 305
		    Sc. Elective (1)
		(c) Geot. Sci. 206
		    Geot. Sci. 306
		    Geot. Sci. 406
		Philosophy
		  or Theology
			Mathematics 320
			Mathematics 331
			Philosophy
			  or Theology
			One Elective
				English
				Philosophy
				  or Theology
				Physics 302
				Physics 304
				Sc. Elective (2)

*Not offered 1970-71.

ACCOUNTANCY

Associate Professor	L. M. Bessner (Dean of Commerce)
Associate Professor	D. F. MacDonald
Assistant Professors	H. J. Dauderis, R. L. McGraw,
	A. Vasilkioti

Courses leading to B.Comm. with a Major in Accountancy

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Accounting 205 Business 204-215 Business 207 French Philosophy Theology	Accounting 306 Business 301 Business 308 English Elective	Accounting 403-404 Accounting 413 Business 402 Philosophy Theology Elective

1) Elective courses must be approved by the Department.
2) It may be necessary to limit enrolment in some of the above courses.

THE INSTITUTE OF CHARTERED ACCOUNTANTS

Students holding the Bachelor of Commerce degree with a Major in Accountancy from Loyola of Montreal at the time of registering with The Institute of Chartered Accountants of Quebec, may apply for exemption from up to three of the five years of training and course work required for the C.A. certificate. Certain of the courses taken at Loyola may be substituted for Institute courses normally offered in the last three years of the Institute programme; however, a minimum of two years employment by a practicing firm of Chartered Accountants is required before entitlement to the C.A. designation. Further information may be obtained from the Chairman of the Department of Accountancy.

THE SOCIETY OF INDUSTRIAL ACCOUNTANTS

Students holding a Bachelor of Commerce degree with a Major in Accountancy from Loyola of Montreal at the time of registration with The Society of Industrial Accountants of Quebec, are usually granted exemptions from a large proportion of the Society's course work leading to the R.I.A. certificate. Further information may be obtained from the Chairman of the Department of Accountancy.

101 Introductory Accounting. Full Course

Required for all Commerce students, and normally offered in the Collegial Programme. An introductory study of accounting principles and practice.

205 Management Accounting. Full Course

This course is designed to develop, through verbal and written analyses of managerial control cases, understanding and skill in the use of financial data in business. An examination is made of current standards of financial reporting, but emphasis is placed on the internal use of such data as a basis for managerial decisions.
Prerequisite: Accounting 101

306 Advanced Financial Accounting. Full Course

Emphasizes specialized areas, particularly those related to business combinations.
Prerequisite: Accounting 101

312 Introductory Business Analysis
(See Business 312)

403 Cost Accounting. Half Course.

The development and interpretation of cost accounting information as a tool of business management.
Prerequisite: Accounting 101

404 Taxation. Half Course

The Canadian taxation structure is examined with particular emphasis on theoretical and practical problems in the areas of individual and corporate income taxes.
Prerequisite: Accounting 101 or departmental approval

406 Finance. Full Course
(See Business 301)

413 Auditing and Investigation. Full Course

Introduction to auditing; classification and scope of audits; internal control; legal and moral responsibilities of auditors; auditing standards; advanced auditing and investigations; C.I.C.A. handbook.
Prerequisite: Accounting 101

BIOLOGY

▼
▼
▼

Professor (Chairman)	Rev. S. Drummond, S.J.
Associate Professor	Rev. R. T. Cronin, S.J.
Assistant Professor	K. S. Dhindsa

Courses leading to a B.Sc. with a Major in Biology-Chemistry (a)

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	BIOLOGY 202 CHEMISTRY 212 CHEMISTRY 221 CHEMISTRY 222 Philosophy Theology	BIOLOGY 304 BIOLOGY 305 CHEMISTRY 323 CHEMISTRY 324 Mathematics 202 Philosophy	BIOLOGY 406 BIOLOGY 408 English Philosophy or Theology Two electives

*Not offered 1970-71.
(a) Third year will be discontinued after 1970-71.
A new three year programme will be introduced in 1971.

101 Introduction to Biology. Full Course   R. T. Cronin

An introductory course encompassing the fundamentals of Botany and Zoology from the cellular to the phylogenetic levels, and embracing the broader interrelationships of all living organisms and their environment. The course, or its equivalent, is a prerequisite for all students who intend to elect a Biology Major in the University Programme.
Lectures: two hours per week for two terms.
Laboratory: three hours per week for two terms.
Text: to be announced

131 Fundamentals of Biology. Full Course   K. S. Dhindsa

A series of lectures designed to acquaint the general Arts Student with those fundamental principles of life which are the basis for an understanding of the structure and function of the living body.
Lectures: three hours per week for two terms
Text: Whaley, Breland et al: *Principles of Biology*, Harper & Row

304 Vertebrate Zoology. Full Course.   S. Drummond

The course includes a study of the characteristics and classification of the vertebrates. The important type vertebrates are studied in detail, particular stress being laid on embryological development, structure and function.
Lectures: two hours per week for two terms.
Texts: Storer and Usinger: *General Zoology*, McGraw-Hill
          Arey: *Developmental Anatomy*, Saunders

305 Vertebrate Zoology Laboratory. Half Course.   S. Drummond

The course comprises a detailed study of the structure of amphioxus, dogfish, frog and rabbit. The course is so conducted that, by carefully executed dissections and drawings, the student may be able to trace the main features of organization from the lower to the higher vertebrates.
Laboratory: six hours per week for two terms.
Texts: Storer and Usinger: *General Zoology*, McGraw-Hill.
             Craigie: *Bensley's Practical Anatomy of the Rabbit*, Univ. of Toronto Press.

331 Introductory Neurology. Full Course.   S. Drummond
(Not offered 1970-71)

A study of the nervous system of the vertebrates, especially the mammal.
Lectures: two hours per week for two terms.
Laboratory: three hours per week for two terms.
Texts: Gardner: *Fundamentals of Neurology*, Saunders.
             Netter: *Nervous System*, Ciba.

406 Histology. Half Course.   S. Drummond

An introductory study of the cell and the general tissues. The course is designed to explain in detail the structure and function of the basic tissues and to introduce the various combinations of these in the special tissues of the adult body.
Lectures: two hours per week for the second term.
Laboratory: three hours per week for the second term.
Text: Stiles: *Handbook of Histology*, McGraw-Hill.

## 408 Genetics. Half Course.   R. T. Cronin

Theory. A series of lectures designed to explain the principles of heredity and variation, the classical and modern concept of the gene, DNA, RNA and the genetic code, developmental and population genetics, and eugenics.
Laboratory: A selection of experiments to demonstrate the fundamental laws of genetics.
Lectures: two hours per week for the first term.
Laboratory: three hours per week for the first term.
Text: Strickberger: *Genetics*, Macmillan.

BUSINESS ADMINISTRATION
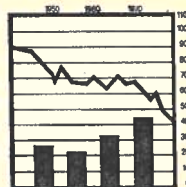
Associate Professor   L. M. Bessner (Dean of Commerce)
Associate Professor   P. Kawaja
Assistant Professors   W. Bannister, L. J. Boyle,
                               G. B. English
Lecturers   D. McPhillips, J. N. Norris

Courses leading to B.Comm. with a Major in Business Administration

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Accounting 205	Business 306	Philosophy
	Business 204-215	Business 308	Theology
	Business 207	Business 301	Business Elective
	French	Business 320	Elective
	Philosophy	English	Elective
	Theology		Elective

*Not offered 1970-71.
1) Elective courses must be approved by the Department.
2) It may be necessary to limit enrolment in some of the above courses.

204 Business Economics. Half Course.

This course consists of three main elements: (1) an explanation of the fundamental theoretical and analytical tools of economics: (2) a review of empirical studies and illustrations of the applications of economic analysis in management; and (3) cases involving actual managerial situations which require the use of analysis.
Prerequisite: Economics 100

207 Mathematical Analysis for Management. Full Course.

An introduction to differentiation and integration of Algebraic functions of a single variable and to Matrix Algebra. The application of these techniques to business problems is discussed.

215 The Canadian Economic Environment. Half Course.

The objective of this course is to provide students with an understanding of the factors that determine the economic environment of business in Canada. It includes a study of income determination theory, monetary and fiscal policy, trade and commercial policy, and the impact of industrialization and foreign investment on the Canadian economy.
Prerequisite: Economics 100

301 Finance. Full Course.

A study of the corporate investment in assets and the sources of funds available to finance this investment. Emphasis is placed on long term financing. Extensive use is made of case material.
Prerequisite: Accounting 101

304 Organizations and Associations
(See Sociology 304)

306 Administrative Practices. Full Course.

The objective of this course is to increase the student's awareness of individual behavior, interpersonal relationships and group dynamics as they influence the organization. The course will include lectures, group discussions and case material.

308 Business Statistics. Full Course.

This course is designed to acquaint the student with statistical methods applicable to business. Curve fitting, variation, correlation and regression are included.

312 Introductory Business Analysis

This is an optional introductory business course available to students in the Faculties of Arts, Science, and Engineering. It is designed to cover some of the major aspects of business, including financial statement preparation and analysis, finance, investment management, marketing and organizational behavior.

320 Marketing Management. Full Course.

The purpose of this course is to outline the scope of marketing and the nature of the marketing manager's job. Cases are used to show the interrelations among marketing functions and to enable students to learn to think in terms of a coordinated approach in developing a marketing program.

402 Commercial Law. Full Course.

Laws of contracts, sales agency, partnerships, company law and negotiable instruments.

406 Human Relations. Half Course.

This course is designed as an extension of Business 306. In the first part of the course the emphasis will be on developing interpersonal abilities, in the second, a comprehensive examination of existing organizational theory will be undertaken.
Prerequisite: Business 306 with a "B" average, or departmental approval

410 Administration of the Firm. Half Course.

An introduction to the basis of management through a study of principles and a brief inquiry into the major foundations of management authority and responsibility. The managerial functions of planning, organizing, staffing, direction and control are analyzed and described. Extensive use is made of cases.

411 Business Policy. Half Course.

This course is designed to acquaint fourth year students with major issues of company policy as they confront top management of the enterprise. It is intended to give some experience through analysis of general management cases, in diagnosing problems and formulating policies and programs of action. Departmental approval is required for registration in this course.

417 Operations Analysis. Full Course.

A study of operations research techniques such as queueing theory, inventory theory, linear programming and the Monte Carlo method, and the application of these to marketing, production and administrative problems.
Prerequisites: Business 207 and Business 308

421 Sales Management. Half Course.

This course deals with (1) the principles and policies of sales organization and some typical sales organizational structures; (2) sales operation, including such topics as selecting, training, compensating, supervising and stimulating salesmen; (3) sales planning, including such tasks as determining sales and market potentials, forecasting sales, preparing sales department budgets and establishing territories and quotas; (4) an analysis of sales operation and evaluation of salesmen's productivity and effectiveness.
Prerequisite: Business 320

422 Advertising Management. Half Course.

A general introduction to the field of advertising through lectures and case discussion. The advertising function and how it relates to marketing; history, function and purpose; agency revenues and how they are derived; agency organization and client relationships; campaign planning, copy writing and advertising art; media planning and execution; print and broadcast production; marketing and advertising research; publicity, public relations, sales promotion and merchandising; accounting and cost control; billing methods; the future of advertising and its role in the economy.
Prerequisite: Business 320

430 Investment Management. Full Course.

This course is designed to develop an understanding of the operations of major financial markets as well as the methods used in the evaluation of the various types of securities. A major portion of the course is devoted to the principles of portfolio management.
Prerequisite: Business 301 and departmental approval

440 Advanced Financial Management. Half Course.

This course is designed as an extension of Business 301. Advanced techniques of financial analysis are studied and discussion of current financial literature is an integral part of the course. Comprehensive cases are analyzed in detail.
Prerequisite: Business 301; to qualify for admission to this course a "B" average in Business 301 is required.

450 Marketing Research. Half Course.

The objective of this course is to train students in the use of marketing research techniques. The place of research in the marketing process, the role of models and the development of measurements are discussed. Emphasis is placed on planning and executing marketing studies and on the applications of marketing research.
Prerequisite: Business 320

470 Production Management. Half Course.

The course is designed to introduce students to the fields of production management. It focuses through the use of case problems on the design and operation of production systems and on quantitative techniques that are relevant to the manufacturing process.

CENTRE FOR AFRICAN STUDIES

Associate Professor and
Director (History)   Donald C. Savage
Assistant Professor
(Political Science)   David Porter

The Centre for African Studies was created by the Senate of Loyola College in order to co-ordinate African research and course work on the campus. The Centre offers courses in conjunction with other departments (e.g., History, Political Science) and students will register and receive credit for these courses as History, Sociology, Modern Languages or Political Science courses.

HISTORY

209 Introduction to the History of Africa. Full Course. D. C. Savage

Africa before the Europeans; Islamic and European conquests; slavery, resistance movements and the rise of nationalism.
Text: Rotberg, *Political History of Tropical Africa.*
Lectures: 3 hours per week for two terms.

304 Nationalism in Africa. Full Course.   D. C. Savage

Resistance to Europeans, intellectual origins of African nationalism (Blyden, Du Bois, Garvey, Padmore, Césaire, Senghor), independent churches, the rise of nationalist political parties, nationalism after independence.
Texts: Kohn and Sokolsky, *African Nationalism in the 20th Century;* Hodgkin, *Nationalism in Colonial Africa;* Sithole, *African Nationalism.*
Seminar: 2 hours per week.

POLITICAL SCIENCE

757H The Stages of Political Development. Full Course.   David Porter

An analysis of factors causing political systems to change. Examination of the traits of each of four stages from national unification to the politics of abundance.
Text: Organski, *The Stages of Political Development.*
Lectures: 3 hours per week for two terms.

735 The Politics of Race. Full Course.   David Porter

A comparative study of the racial factor in contemporary politics with special emphasis on Southern Africa, colonial Algeria and the United States.
Texts: Van den Berghe, *South Africa: A Study in Conflict;* Fanon, *The Wretched of the Earth; The Autobiography of Malcolm X.*
Lectures: 3 hours per week for two terms.

750 African Government and Politics. Full Course.   David Porter

Colonialism, imperialism and the rise of nationalism, government and politics of the independent African states.
Lectures: 3 hours per week for two terms.

CHEMISTRY

Associate Professor (Chairman)	Rev. A. Graham, S.J.
Associate Professors	M. Doughty, K. Ekler, D. McElcheran, T. Nogrady, G. J. Trudel R. H. Zienius, R. H. Pallen
Assistant Professors Lecturer	M. Baldwin (Mrs.)

Courses leading to an Honours B.Sc. in Chemistry

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	CHEMISTRY 211 CHEMISTRY 212 CHEMISTRY 221 CHEMISTRY 222 CHEMISTRY 231 Mathematics 232 Philosophy Theology	CHEMISTRY 313 CHEMISTRY 323 CHEMISTRY 324 CHEMISTRY 332 CHEMISTRY 333 CHEMISTRY 334 English Mathematics 332 Philosophy Physics 205 (theory)	CHEMISTRY 425 CHEMISTRY 426 CHEMISTRY 435 CHEMISTRY 436 CHEMISTRY 437 CHEMISTRY 450 Philosophy or Theology

Courses leading to a B.Sc. with a Major in Chemistry

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	CHEMISTRY 212 CHEMISTRY 221 CHEMISTRY 222 CHEMISTRY 231 Mathematics 232 Philosophy Theology	CHEMISTRY 211 CHEMISTRY 313 CHEMISTRY 323 CHEMISTRY 324 CHEMISTRY 334 English Philosophy	CHEMISTRY 332 CHEMISTRY 333 CHEMISTRY 425 CHEMISTRY 426 Philosophy or Theology

Courses leading to a B.Sc. in Chemistry

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	CHEMISTRY 212 CHEMISTRY 221 Mathematics 232 Philosophy Theology	CHEMISTRY 231 CHEMISTRY 222 CHEMISTRY 314 English Philosophy One Elective	CHEMISTRY 313 CHEMISTRY 324 Philosophy or Theology One Elective

*Not offered 1970-71.

211 Inorganic Chemistry and Valence Theory. Half Course.

K. Ekler

Atomic and Molecular Structure. Valence. Electro-negativity. Bond angles and lengths. Coordination chemistry. Chemical periodicity.
Lectures: one hour per week for two terms.

212 Elementary Inorganic Quantitative Analysis. Full Course.

G. J. Trudel, R. H. Zienius

Theoretical aspects of gravimetric and volumetric analysis. Acid-base and oxidation-reduction titrations. Determination of ores by volumetric methods. Theory of precipitation and complex formation analysis.
Prerequisite: Chemistry 101.
Lectures: 1 hour per week for two terms.
Lab: 3 hours per week for two terms.
Text: Kolthoff and Sandell, *Quantitative Inorganic Analysis*, Macmillan.

221 Introductory Organic Chemistry Theory. Full Course.

M. Doughty

Introductory course in nomenclature, type reactions and synthesis of aliphatic, alicyclic and aromatic hydrocarbons and their derivatives. Theoretical aspects including resonance, orbital theory and simpler reaction mechanisms are introduced.
Prerequisite: Chemistry 101.
Lectures: 3 hours per week for two terms.
Texts: English and Cassidy, *Principles of Organic Chemistry*, McGraw-Hill. Werner Herz, *The Shape of Carbon Compounds*, Benjamin.

222 Organic Chemistry Laboratory. Half Course.

A. Graham, M. Baldwin

A systematic preparation of simpler organic compounds; the theory of fundamental techniques such as steam distillation; filtration; the determination of physical constants. To be taken in conjunction with Chemistry 221.
Prerequisite: Chemistry 102.
Lab: 3 hours per week for two terms.
Text: Cason and Rapoport, *Basic Experimental Organic Chemistry*, Prentice-Hall.

231 Introductory Physical Chemistry. Full Course.

R. H. Zienius

The gaseous state and elementary kinetic theory state; crystalline state; an introduction to the first and second laws of chemical thermodynamics; thermochemistry; free energy and activity; thermodynamics of solutions; homogeneous equilibrium and kinetics; Phase rule; electrochemical phenomena; introductory theory of atomic and molecular spectra and structure. Problems form an integral part of this course.
Lectures: 3 hours per week for two terms.
Text: Maron and Prutton, *Principles of Physical Chemistry*, 4th Ed., Macmillan.

313 Instrumental Analysis. Full Course.

R. H. Zienius

A study of modern instrumental methods in inorganic and organic analysis. Electro-chemical absorption, optical and radio-chemical methods, mass spectrometry, chromatography, NMR and X-ray diffraction are discussed.
Prerequisite: Chemistry 212, 221, 231.
Lectures: 2 hours per week, first semester.
Lab.: 3 hours per week, second semester.

314 Industrial Chemistry. Full Course.
R. H. Zienius

Brief history of the chemical industry in Canada; outline of how industrial processes are developed; physical equipment of a chemical plant; calculation of material and energy changes in a plant; description of some of the more important processes now in use, as exemplified in the petroleum, petrochemicals, plastics, fibres, fertilizers, synthetic rubber, pharmaceutical, and wood chemical industries; pollution. This course includes two plant tours.

Prerequisite: Chemistry 221.

Lectures: 2 hours per week for two terms.

Texts: R. N. Shreve, *Chemical Process Industries*, McGraw-Hill. J. A. Kent, *Reigel's Industrial Chemistry*, Reinhold.

323 Intermediate Organic Chemistry Theory. Full Course.
T. Nogrady, G. J. Trudel

Selected topics of polymer and natural products chemistry, including carbohydrates, proteins, terpenes and steroids, heterocyclics and alkaloids. Reaction mechanisms and stereochemical aspects are treated extensively. The biological significance of many compounds is stressed.

Prerequisite: Chemistry 221.

Lectures: 2 hours per week for two terms.

Reference: Fieser and Fieser: *Topics in Organic Chemistry*, Reinhold. Roberts and Caserio: *Basic Principles of Organic Chemistry*, Benjamin.

324 Identification of Organic Compounds. Full Course.
M. Doughty, A. Graham

Theory and practice of organic qualitative analysis; most of the laboratory time is given to the identification of unknown compounds and the separation and identification of a simple mixture.

Prerequisite: Chemistry 222.

Lectures: 1 hour per week for two terms.

Lab.: 3 hours per week for two terms.

Text: Shriner, Fuson and Curtin, *The Systematic Identification of Organic Compounds*, Wiley.

332 Chemical Thermodynamics. Full Course.
K. Ekler

As a second course of Thermodynamics. The first and second laws are expanded axiomatically leading to a thorough treatment of activity relationships; Substantial application is made in the behaviour of gases, solutions and chemical equilibrium. Further applications arise in the subsequent Chemistry 333.

Lectures: 2 hours per week for two terms.

333 Advanced Physical Chemistry. Full Course.
D. McElcheran

Succeeds Chemistry 332 with analysis of the states of matter based largely on phase rule. The elements of classical statistical mechanics. Surface chemistry and the colloidal state. Reaction kinetics emphasizing catalysis.

Lectures: 2 hours per week for two terms.

334 Physical Chemistry Laboratory. Half Course.
D. McElcheran

Lab.: 4 hours per week, first term.

425 Organic Chemistry Theory. Full Course.
T. Nogrady

An advanced study of physical organic chemistry and stereochemistry. The electron theory of reaction mechanisms such as nucleophilic aliphatic substitution, elimination and addition reaction, aromatic substitution, free radical mechanisms, are discussed in depth. Modern concepts of stereochemistry and conformational analysis are also covered.

Prerequisite: Chemistry 323.

Lectures: 2 hours per week for two terms.

Texts: R. Breslow: *Organic Reaction Mechanisms*, Benjamin. K. Mislow: *Introduction to Stereochemistry*, Benjamin. Reference: Smith and Cristol: *Organic Chemistry*, Reinhold.

426 Organic Preparation Laboratory I. Half Course.
T. Nogrady

The student performs modern multi-step synthesis and is expected to become proficient in such techniques as vacuum distillation, catalytic hydrogenation, high pressure reactions and the judicious use of instrumental methods like IR and NMR spectroscopy and chromatographic methods.

Prerequisite: Chemistry 222,324.

Lab.: 6 hours per week for one term.

Text: Fieser: *Organic Experiments*, Raytheon.

427 Organic Preparation Laboratory II. Half Course.
T. Nogrady

A confirmation of Chemistry 426 stressing modern techniques and syntheses requiring consultation of the research literature. Students taking Chemistry 450 will not take Chemistry 427.

Prerequisite: Chemistry 222,324,426.

Lab.: 6 hours per week for one term.

Text: Fieser: *Organic Experiments*, Raytheon.

435 Advanced Physical Chemistry Laboratory. Half Course.
D. McElcheran

A continuation of Chemistry 333, but fewer and more demanding experiments.

Prerequisite: Chemistry 333.

Lab.: 4 hours per week for one term.

436 Electrochemistry. Half Course.
K. Ekler

Electrolytic conduction and electrolysis: Faraday's laws; specific and equivalent conductance and measurement of conductance; mobility and transport number; theory of strong electrolytes; thermodynamics of cells; electrode potentials; concentration cells; liquid junction potentials; overvoltage and polarization phenomena.

Prerequisite: Chemistry 332, 334.

Lectures: 1 hour per week for 2 terms.

437 a) Quantum Chemistry, b) Kinetics. Full Course.   D. McElcheran

a) Mathematical foundation; elements of: Vectors, complex variable, matrices, group theory. The Schrödinger Equation and the particle-in-the-box, harmonic oscillator, rigid rotator and H-atom, problems. Perturbation theory applied to: atoms-atomic spectra. Molecules-v.b.; m.o., ligand-field theory, molecular spectra.

b) Statistical Mechanics and Chemical Kinetics. Quantum statistics — selection of thermodynamic problems. Gas phase kinetics. Absolute rate theory, unimolecular reactions, free radical mechanisms, chain mechanisms. Individual tutorials in problem solving approximately once a month.

Lectures: 3 hours per week for two terms.

450 Senior Thesis. Half Course.   Staff

The Department will make available to selected students a senior thesis in Organic or Physical Chemistry to be done in the second term.

Lab.: 6 hours per week in the second term.

CLASSICS

Assistant Professors	J. E. Lempkowski (Chairman), D. Brown, R. Russo, Mrs. B. Wardy, Mrs. E. Preston

Courses leading to an Honours B.A. in Classics

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Greek Latin Latin French Philosophy Elective	Greek Greek Latin Ancient History Philosophy Theology	Greek Honours Tutorial Latin Honours Tutorial Prose Composition Theology Elective

Courses leading to a B.A. with a Major in Classics

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Classics Classics English French Philosophy Theology	Classics Classics Classics Theology Two Electives	Classics Classics Philosophy Two Electives

*Not offered 1970-71.

The Department of Classics offers two distinct types of courses. Courses in Classical Civilization (Classics in Translation) are designed to provide a basic acquaintance with Classical literature and civilization for non-classicists. They demand no knowledge of Latin or Greek. Courses in Latin and Greek are intended for Classics honours students and majors and others who wish to study Classical literature in the original languages in greater depth.

COURSES IN LATIN AND GREEK

300 Greek Literature. Full Course.

Demosthenes' *Philippics* and Euripides' *Alcestis*.
Prerequisite: Classics 212.
Lectures: 3 hours per week for two terms.

301 Plato: *The Republic*. Full Course.
(Not offered in 1970-71)

Prerequisite: Classics 212.
Lectures: 3 hours per week for two terms.

302 Lucretius. Full Course.

(Not offered in 1970-71)

Prerequisite: Classics 202.
Lectures: 3 hours per week for two terms.

303 Livy and Tacitus. Full Course.

Extensive readings from Livy, Books 21-30, and the *Annales* of Tacitus, with particular attention to the Latinity peculiar to each historian.
Prerequisite: Classics 202.
Lectures: 3 hours per week for two terms.

312 Herodotus and the Lyric Poets. Full Course.

(Not offered in 1970-71)

Prerequisite: Classics 300.
Lectures: 3 hours per week for two terms.

313 Homer. Full Course.

(Not offered in 1970-71)

Extensive readings from the two epics in Greek; both works in their entirety in English.
Prerequisite: Classics 300.
Lectures: 3 hours per week for two terms.

402 Roman Comedy. Full Course.

Prerequisite: Classics 202.
Lectures: 3 hours per week for two terms.

403 Roman Satire. Full Course.

(Not offered in 1970-71)

Prerequisite: Classics 202.
Lectures: 3 hours per week for two terms.

404 Cicero. Full Course.

(Not offered in 1970-71)

Careful examination of selections from the oratorical and philosophical works.
Prerequisite: Classics 202.
Lectures: 3 hours per week for two terms.

412 Greek Tragedy. Full Course.

Aeschylus' *Agamemnon*, Sophocles' *Oedipus Rex*, Euripides' *Hippolytus*.
Prerequisite: Classics 312.
Lectures: 3 hours per week for two terms.

HONOURS COURSES

All university-level general courses offered by the Department of Classics may be taken as honours courses. In some cases only students in the honours programme will be ordinarily permitted to register for a specific course in any given term; in other cases, i.e., when a course is taken that is open to all students, the students in the honours programme will meet with the instructor for tutorial sessions in addition to the regularly scheduled classes. All students pursuing either the major or the honours programme in Classics must consult with the Department Chairman before final registration.

ANCIENT HISTORY AND ARCHAEOLOGY

The Department of Classics, by arrangement with the Department of History, offers university-level courses in Ancient History and Archaeology. These courses may be taken as either Classics or History courses and are listed as course offerings by both Departments. A seminar course in Ancient History for honours students in either Department is given each year on some specific period or problem in Ancient History. The subject matter is different each year.

The Archaeology course is intended primarily for honours students. Permission of the instructor is required before a student may register.

The Ancient World is a general course open to all university-level students. Students in honours programmes desiring to take this course must obtain the permission of the Chairman of the Department in which they are registered.

350 The Ancient World. Full Course.

After a preliminary consideration of the early civilizations of Mesopotamia, Egypt, India and China, the course concentrates on the history of ancient Greece and Rome, with special attention to those institutions, theories, and discoveries that have most influenced our own time.
Lectures: 3 hours per week for two terms.

360 An Introduction to Archaeology. Full Course.

Archaeology as a science; its purpose, methods, and techniques. The relation of Archaeology to Pre-History, Ancient History, Fine Arts, and Anthropology. While the course will deal principally with Classical Archaeology and Greek and Roman Art, the Archaeology of Africa, the Orient, and the Americas will also be considered.
Lectures: 3 hours per week for two terms.

370 The Origins of Rome. Full Course.

The early history of the city that was to rule the world. Pre-historic Italy: Palafitte, Terremare, and Villanova. The Etruscans and the coming of the Greeks. The Italic Peoples. The evidence from Archaeology. The story of Romulus and Remus. The seven kings. The record of Livy. Modern theories and interpretations.
Seminar: 2 hours per week for two terms.

COMMUNICATION ARTS

Associate Professor (Chairman)	Rev. John E. O'Brien, S.J.
Professor	John Buell
Resident Artist and Associate Professor	C. Gagnon
Associate Professors	Rev. C. Fischer, S.J., M. Malik
Assistant Professors	Rev. M. Gervais, S.J., J. Hofbeck (Theological Studies), H. W. Ladd (Psychology), T. McPhail (Sociology), G. Valaskakis
Lecturers	L. Snider (Sociology), S. Schouten
Special Lecturers	B. Brenn, J. Max, J. Moore
Technical Supervisor	R. Dolinsky
Technicians	G. Robitaille, V. Surio

OBJECTIVES OF THE DEPARTMENT

The Department bases its work in communication theory and research, cinema, radio, and television on a solid foundation in the liberal arts.
The curriculum is intended to develop in students a scholarly and creative approach to mass media. It is designed:

1. for students who intend to continue graduate studies in communication;

2. for students who intend to make a career in the public arts as writers, critics, communication consultants, directors, and performers;

3. for students who wish to enter the teaching profession as specialists in film and television education;

4. for students who intend to enter the media industries, the media professions, and the public arts in the areas of publicity, promotion, advertising, and public relations.

FACILITIES

The Department has one professionally equipped television-film studio with 3 Plumbicon cameras, telecine chain, and video tape recorder, 2 professionally equipped radio studios and control rooms, 2 film editing rooms, 1 darkroom, 1 multi-media room and 1 graphics room.

COURSE REQUIREMENTS FOR A B.A. WITH A MAJOR IN COMMUNICATION ARTS

GENERAL REQUIREMENTS:

2 Collegial Years
University I: Not offered 1970-71.
University II (as for present 3rd year): Philosophy; ONE elective; Three Communication Arts.
University III (as for present 4th year): Communication Arts 450 or Theology; ONE elective; Three Communication Arts.

SPECIFIC REQUIREMENTS:

7 full courses in the Department.
A student may be invited, after demonstrating his competence and creative ability, to enroll in an Experimental Workshop (Course 460 or 470). The workshop is taken in addition to the seven full courses required for the major.
Required courses: Nos. 200, 205, 300.
Required labs: The equivalent of two full course credits to be chosen from the following options: Nos. 260, 270, 275, 360, 365, 370, 375.
Electives in the Department: Three full course credits to be chosen after consultation with the Department.

200 Explorations in Communication. Half Course.   C. Fischer

An introduction to experiences in total communication and to a probe of these experiences, v.g., architecture, art, drama, film, music, advertising, computers, etc. — the course aims at a heightened awareness and understanding of total communication in present-day environments.
2 hours per week for two terms.

205 Communication Analysis. Half Course.   M. Malik

General and detailed analysis of various information complexes, v.g., exhibitions, theatres, cinema performances, museums, galleries, countrysides, city streets, highways, department stores, etc., from the viewpoint of the information aids used to influence the perception of visitors — light, space, sound, pictures, words, and exhibits. Individual student projects will be assigned.
2 hours per week for one term.

260 Photography as Visual Language. Half Course. Lab.   J. Max

The objective of this course is to help the student develop a personal visual language and to make it possible for him to translate his experience of a particular aspect of life into an image of it. The student explores his subject, himself and the relationships, oppositions, tensions and meanings which this conscious and in varying degrees unconscious exploration takes him on. Individual projects will be assigned.
3 hours per week for one term.

270 Fundamentals of Radio Production I. Half Course. Lab. B. Brenn

This course is designed to give students (1) a working knowledge of all the basic elements involved in the production of a radio program, (2) practical creative experience in the production of the simpler formats for radio, and (3) practice in voice control and basic announcing techniques. Discussions are based on experiments in communicating ideas through the use of sound.

3 hours per week for one term.

275 Fundamentals of Radio Production II. Half Course. Lab.

B. Brenn

A continuation of Part I, the course explores the creative possibilities inherent in fairly complicated programming and experiments with sportscasts, words and music shows, magazine shows, classical music programs, documentaries and dramas. All programs are recorded for playback and discussion.

Prerequisite: Course 270.

3 hours per week for one term.

300 Mass Media and Cultural Forms. Full Course. J. Buell

In general, this course is a study of media and modern civilization, and it concentrates on the communicational and art forms of film, radio, television, and print. It examines, among other things: the evolution of the traditional fictional and rhetorical arts into their mass media forms, the actual forms and formats necessitated by the mass media, the media theories of Marshall McLuhan, the function of image and symbol in communication, the entertainment aspect of mass reception, and the current practices, problems, and possible developments in these fields.

3 hours per week for two terms.

305 Mass Society. Half Course. Second Term. L. Snider

Collective behavior including fads, fashions, crazes, mobs, riots, social movements and publics are analyzed and explained within a social-psychological framework. The origins and dynamics, internal and external, of social action and pressure groups are discussed. Mass communications, in terms of form content are studied as factors in the various forms of collective behavior. The implications of mass leisure and population qualities such as age, sex, racial and religious factors in urban centers are appraised.

3 hours per week for one term.

310 The Basics of Fictional Script-Writing. Half Course. J. Buell

This course is meant for talented students who want to start learning the craft of creating screenplays. It is concerned primarily with the invention and proper development of material that forms the substance of fictional films (commonly referred to as "features", as distinguished from documentary, instructional, and poetic films). The course deals with the fundamentals of film-narrative, story-line, dialogue, characterization, kinds of action, pacing, and timing. The student will at the same time study films and film sources (stories, novels, etc.) from the viewpoint of script-writing. A knowledge of the film medium is essential (the problems of direction, camera, editing), but not to the extent of being proficient in production.

A student applying for this course must give evidence of talent by submitting examples of his or her fictional work before August 1st.

2 hours per week for two terms.

320 Communication by Speech. Full Course. G. Valaskakis

A survey course in oral communication, this course is designed to give the student knowledge of and experience in speech situations with radio, television, and "live" audiences. Students will analyze, prepare, and deliver speeches of various types and will participate in interviews, group discussions, and dramatic readings. Course includes some study of voice and movement.

3 hours per week for two terms.

325 Small Group Interaction. First Term. T. McPhail

An introduction to structures and processes of the internal dynamics of small groups and their relationship to the individual and larger social systems. On the basis of field and laboratory research the impact of small groups will be examined with emphasis on cohesion, norms, leadership, communications and participation.

Prerequisite: Sociology 100 or Sociology 201.

330 The Silent Cinema. Half Course. First Term. M. Gervais

A history of the Silent Cinema in its feature films, tracing the growth of the art form from its earliest days through the great works (v.g., Griffith, Stroheim, the American comics, the Scandinavian mystics, the German expressionists and realists, the Russian Revolutionaries, etc.). The over-all human dimension of these artistic works will be examined as well as the more strictly aesthetic preoccupations of their creators.

This course is given each year, on a two-year cyclic basis:

    1970-71: Unit A, with particular emphasis on the Americans: e.g., Griffith, Chaplin, Keaton the comics, Stroheim, etc.

    1971-72: Unit B, with particular emphasis on the Russians (Eisenstein, Pudovkin, Bovzenko), the Germans (Lang, Murnau, Pabst, etc.), the Scandinavians, and others.

2½ hours per week — screening, discussion

1½ hours per week — analysis, discussion

335 The Talkies. Half Course. Second Term. M. Gervais

A history of the feature talkies, tracing the development of the film art form and concentrating on the classics and leading genres, stressing these films in their over-all human dimensions and in their more strictly aesthetic perspectives.

This course is given each year, on a two-year cyclic basis:

    1970-71: Unit A, with particular emphasis on the Americans: great individual directors such as Ford, Welles, Hitchock, and others, and a study of the Hollywood filmic genres: the musical (Busby, Berkley, Astaire), gangster, western, Marx Brothers and burlesque comedy, sophisticated comedy, etc.

    1971-72: Unit B, with particular emphasis on the Russians; the Germans; the French (Renoir, Clair, Vigo, Cocteau, Carné); and others.

2½ hours per week — screening, discussion

1½ hours per week — analysis, discussion

340 Documentary Film. Half Course. First Term.   M. Malik

A survey of the documentary film field, the course will examine the various styles of documentaries, v.g., the Romantic, Realistic, Impressionistic, Scientific, Biographical, Ethnographical, and Sociological. These styles will be examined in detail in the works of Flaherty, Grierson, Capra, Wright, Kroiter, and Thompson. Individual student projects will be assigned.

Screenings: every second week for one term. Consultation hours with Professor to be arranged.

355 Communication Research. Half Course. Second Term.   M. Malik

An examination of the aids and practical research methods for information chains. Limited experiments will be conducted on information complexes, v.g., 3D complexes—exhibition spaces, museums, galleries—2D complexes—cinema, photography, the painted picture—metacomplexes and internal information spaces. Individual and group projects will be assigned.

Prerequisite: Course 205.

3 hours per week for one term.

360 Elementary Film Making I. Half Course. Lab.   C. Fischer

An introduction to film making, this course stresses familiarization with equipment, sensual-visual perception, and the basic construction of a film in terms of visual and literary continuity.

Prerequisite: Course 260 or consent of the instructor.

3 hours per week for one term.

365 Elementary Film Making II. Half Course. Lab.   C. Fischer

A study of the motion picture camera and its uses, of lenses and of creative focusing, the course examines in detail visual continuity and sensual and psychological perception.

Prerequisite: Course 360 or consent of the instructor.

3 hours per week for one term.

370 Fundamentals of Television Production I. Half Course. Lab.
    G. Valaskakis

After introducing students to the use of video, audio, and lighting boards, the course provides opportunities for experimentation in the scripting, programming, and producing of the simpler programme formats from rehearsal through final production. All programs are videotaped for playback and discussion.

3 hours per week for one term.

375 Fundamentals of Television Production II. Half Course. Lab.
    G. Valaskakis

A continuation of Part I, this course explores the creative possibilities inherent in the television medium and the better original works of students are produced. All programs are videotaped for playback and discussion.

Prerequisite: Course 370 or consent of the instructor.

3 hours per week for one term.

400 Mass Communication. Half Course. First Term.   T. McPhail

The focus of this course will be on the nature of communication as a social process, the relative influence and effect of person to person and mass media to person communication in relation to attitude formation and change, behavior, values and society in general. Particular emphasis is placed on the capacity of mass media to generate social action under varying social conditions. Recent empirical studies are examined.

3 hours per week for one term.

405 Psychology of Communication. Half Course. First Term.
Offered in Evening Division only.   H. V. Ladd

The course is focused on the development of language and the use of language as a means of communication and the development of language as a symbolic system. Self-communication and inter-personal communication are the major areas to be considered.

3 hours per week for one term.

410 Writing for Film and Television. Full Course.   J. Buell

A teaching-workshop to enable talented students to prepare and create material in script form for film and television. The material will vary in content; drama, documentary, instruction—original and adapted; and it will go from shorter forms to the half-hour script and longer. The submission of two half-hour scripts, or the equivalent in the judgment of the professor, will constitute the year's examination.

N.B.: Students taking this course must have a knowledge of these media, or must concurrently be taking production courses in them.

3 hours per week for two terms.

415 Seminar in Advertising and Public Relations.   J. Moore

(a) A probe of advertising, the seminar will examine among other things the social and economic effects of advertising, the principles of effective copy, layout, and design, and the rationale behind present-day media strategies.

(b) A study of the nature, organization, and function of the corporate image for various sectors of the public, as clarified by case analysis of present-day industries.

Individual and group projects will be assigned.

3 hours per week for two terms.

420 Propaganda. Half Course.   S. Schouten

The course is based on the assumption that today propaganda envelops man with its orchestration of communication tools and psychological techniques. The history and character of propaganda will be presented as an introduction to an analysis of its permeation into technological society. Under discussion will be such phenomena as mass hypnosis, the propaganda ethic, information warfare, national character, the formation of political opinions and attitudes, statistical persuasion and subliminal communication. Points of reference will include — war information systems, public relations, royal commissions, advertising, group therapy sessions, market research, goverment cultural and social programs, political campaigns and animation social projects.

3 hours per week for one term.

430 The Contemporary Cinema. Half Course. Second Term.
M. Gervais

A study of the great film artists since 1945, from the artistic and the over-all cultural point of view.

This course is given each year, on a two-year cyclic basis:

1970-71: Unit A, intensive study, on the one hand, of Ingmar Bergman and, on the other, of the *nouvelle vague* (Truffaut, Chabrol, Resnais, Varda and, above all, Godard). Other directors and films may be presented such as the Canadians, the Japanese, Satyajit Ray, etc.

1971-72: Unit B, intensive study of the Italians (Neo-Realism, Rossellini, De Sica, Visconti, Fellini, Antonioni, Pasolini, etc.); as well as other films, especially from the Eastern European countries, England (Angry Young Men, Pop-Beatles, Lester, etc.).

2½ hours per week — screening, discussion

1½ hours per week — analysis, discussion

435 Film Ideas. Half Course. Either Term.
M. Gervais

This course centers on problems in film criticism, film theory, and film aesthetics, within the context of the contemporary sensibility. Films highlighting certain contemporary aesthetic positions are seen, discussed, analysed, and written about by the students. The course is run seminar style, in two small groups (one per each term). Students analyse each other's critical work.

Prerequisites: 330, 335, 430 (or by approval of instructor)

3 hours per week for one term.

440 Experimental Cinema: Animation. Half Course.
(Not offered 1970-71.)

A study (1) of experimental films from the beginnings of the cinema through the avant-garde of the late '20's into today's manifestations (v.g., Underground, EXPO, Industrial films) and (2) of animated films, the great cartoons, the masters (v.g., Disney, etc.).

450 Seminar in Contemporary Mass Media and Revelation. Full Course.
J. Hofbeck

The most fundamental problems of man will be explored through a systematic encounter of contemporary mass media and revelation. The approach will be mainly creative with individual and group projects. This encounter should lead to a more explicit awareness of various levels of meaning to be found in contemporary mass media.

3 hours per week for two terms.

455 Communication Programming. Half Course. Second Term.
M. Malik

An advanced seminar for students interested primarily in Communication theory and research. Individual projects will be assigned on the analysis of information, chains, the analysis of performing conditions, the analysis of receiver responses, the design of programs, the realization of pilot programs and the evaluation or measurement of the efficiency of these programs.

Prerequisite: Course 355.

3 hours per week for one term.

460 Experimental Workshop in Motion Pictures.
C. F. Gagnon

Students who have shown more than average promise will be invited to join the workshop. This course is taken in addition to the seven required courses for majors.

Prerequisite: Courses 360, 365.

3 hours per week for two terms.

470 Experimental Workshop in Television.
J. E. O'Brien

Students who have shown more than average promise will be invited to join the workshop. This course is taken in addition to the seven required courses for majors.

Prerequisite: Courses 370, 375.

3 hours per week for two terms.

500 History of Communication Arts. Full Course.
J. E. O'Brien and M. Malik

Closed Registration. Course to be conducted in Europe. Summer 1970. History of architecture, painting, music, film, radio, TV and drama with strong emphasis on information structure and communication process in the arts. Studies in museums, collections, theatres and archives in France, Great Britain, Germany, Italy, Switzerland, and Austria.

(90 hours minimum of lectures from Professors in Europe)

600 Education in Communication Arts. Full Course. Lab.
J. E. O'Brien and M. Malik

Closed Registration. Course to be conducted in Europe. Summer 1970. A survey of styles and methods of education in various Communication Arts —screen education, drama education, film and TV training, education of design and architecture. Studies made of British Film Institute, Bauhaus School of Design, Munich Film and TV Academy, Cinecity in Rome, and IDHEC in Paris.

(90 hours minimum of directed lab. work in museums, galleries, etc.)

COMPUTER SCIENCE
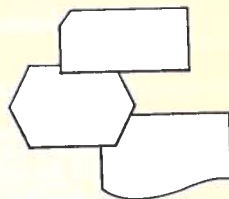
Associate Professor   D. West
Special Lecturers   R. Gallagher
                        M. Fraser

100 Survey of Computers   Elective in Arts

An introductory course for Arts students with no previous experience of computers. History of computer development. Hardware components of a computer system, their capabilities and limitations. How input data are obtained, how a program is organized and written, and how the results are presented and interpreted. The role of computers in science and industry.

Lectures: 2 hours per week for one term.

110 Computer Applications   Elective in Commerce and Arts

A practical introduction to computing, for all students. Exercises in obtaining, entering, storing, altering and retrieving information. Analysis of problems for computer solution; methods of programming and documenting. The use of time-sharing terminals.

Lectures and problems: 2 hours per week for one term.

201 Organization of Data   Elective in Science

A basic theoretical course in data handling. Linear lists, strings, arrays and orthogonal lists. Trees and graphs, and their use in computer languages. Symbol tables; searching and sorting techniques. Computer languages used for processing lists and strings.

Lectures: 3 hours per week for one term.

Prerequisite: C.S. 101 or C.S. 110

211 Elementary Computer Programming

Basic theory and practice of using the computer. Algorithms and procedures; logical tests; subroutines; input and output routines. Documentation by flow charts and decision tables. Internal representation of numbers, characters and instructions; word machines and character machines. Preparation of program and data input decks. Monitors and operating systems; use of conversational terminals. Assembler language programming. High-level languages, illustrated by Fortran IV.

Lectures: 2 hours per week for one term.

Problems: 1 hour per week

220 Business Applications of Computers

Continuation of C.S. 110 for Commerce students oriented toward management rather than data processing. The uses, characteristics and limitations of contemporary computers and techniques used in business. Detailed study of several simple applications, from the original concept to the production and operation of a business system.

Lectures: 2 hours per week for one term.

Class project: 1 hour per week

222 Business Languages   Elective in Commerce and Arts

For Commerce students. Assembler languages for the common computer systems. Programming in R P G and elementary Cobol. Applications to various equipment configurations. Documentation and testing of two complete programs.

Lectures: 2 hours per week for one term.

Problems: 1 hour per week

Prerequisite: C.S. 211

241 Scientific Problem-Solving with Fortran

Elective in Science and Arts

Practical experience in the use of Fortran. The basic rules of Fortran IV and IBM 1620 Fortran. Operating systems, compilers and loaders. Design of input and output format. Documenting and testing of programs. At least four problems typical of those encountered in science and engineering are to be solved on the computer.

Lectures: 2 hours per week for one term.

Problems: 1 hour per week

Prerequisite: C.S. 211 or C.S. 101

325 Mathematical Models of Real Systems   Elective in Commerce

The use of a computer to study situations occurring in the real world. How models are used to study interactions between the parts of a system, to analyze the causes of observed effects, and to predict the effects of changed conditions. The scale, detail and boundaries of a model. The cyclic process of model development. Types of models available — deterministic, probabilistic, macroscopic or microscopic, optimizing. Computer software packages available for modelling and simulation.

Lectures: 2 hours per week for one term.

Problems: 1 hour per week

Prerequisite: C.S. 211

341 Advanced Fortran Usage   Elective in Science

The application of Fortran and its extensions in the development of large and sophisticated program systems. The use of disk and tape storage; segmentation of programs; use of library subroutines; multiple precision calculations; complex and logical variables; alphabetic variables; packing and unpacking of words. Programming for best efficiency and flexibility.

Lectures: 2 hours per week for one term.

Problems: 1 hour per week

Prerequisite: C.S. 241

401 Theory of Automata
Elective in Science

Theoretical description of computing machines. Finite state automata and sequential machines. Equivalence of states and machines, congruence, reduced machines, and analysis and synthesis of automata. Turing and other machines.
Lectures: 3 hours per week for one term.
Prerequisite: C.S. 201

402 Computer Languages
Elective in Science

Formal definition of programming languages; specification of syntax and semantics. Simple statements in various notations. Properties of algorithmic languages including scope of declarations, storage allocation, grouping of statements, and subroutines. Languages for list processing, string manipulation, data description, and simulation. Run-time representation of program and data stuctures.
Lectures: 3 hours per week for one term.
Prerequisite: C.S. 201 and C.S. 211

The following computer courses are given in other departments. Approval for registration in any of these courses must be obtained from the department concerned.

131 Engineering — Numerical Analysis and Computation Methods. Half Course.

Lectures: 2 hours per week, one term.
Computer Lab: 2 hours per week, one term.

154 Engineering — Introduction to Digital Computer Engineering. Full Course.

Lectures: 2 hours per week, both terms

164 Engineering — Digital Computer Applications in Engineering. Full Course.

Lectures: 2 hours per week, both terms
Lab: 3 hours per week

684 Engineering — Switching Circuits. Half Course.

Lectures: 2 hours per week, one term
Lab: 3 hours per week

240 Mathematics — Numerical Methods. Full Course.

Lectures: 3 hours per week, both terms

440 Mathematics — Numerical Analysis. Full Course.

Lectures: 3 hours per week, both terms

ECONOMICS
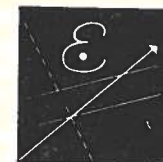
Associate Professor (Chairman)	S. A. Alvi
Associate Professors	F. J. Hayes, A. G. Lallier,
Assistant Professors	C. S. Papadantonakis, A. Takahashi, Bernice Wright
Lecturers	M. Hussain, E. Khan, B. S. Sahni

Courses leading to an Honours B.A. in Economics

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	ECONOMICS 260 ECONOMICS 271 French Philosophy Theology Elective	ECONOMICS 366 ECONOMICS 354 ECON. Elective Philosophy Theology	ECONOMICS 461 or 464 or 480 ECONOMICS Electives (2) Electives (2)

Courses leading to a B.A. with a Major in Economics

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Classics 112 or 202 or 212 or 221 ECONOMICS 210 ECONOMICS 221 or 202 French Philosophy Theology	ECONOMICS 306 ECONOMICS 304 Philosophy Theology English	ECONOMICS Electives (3) Electives (2)

Courses leading to an Honours B.Comm. in Economics

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	ECONOMICS 260 ECONOMICS 271 French Philosophy Electives (2)	ECONOMICS 366 ECONOMICS 354 ECON. Elective Philosophy Theology	ECONOMICS 461 or 464 or 480 ECONOMICS Electives (2) Electives (2)

Courses leading to a B.Comm. with a Major in Economics

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Accounting 205 ECONOMICS 210 ECONOMICS 221 or 202 French Philosophy Elective	ECONOMICS 306 ECONOMICS 304 Philosophy Theology English	ECONOMICS Electives (3) Electives (2)

*Not offered 1970-71.

NOTE: The Economics Department may permit a third year student to take one additional approved course, if a 70% average and a record clear of supplementals, repeat courses, etc., has been maintained in the preceding two years.

100 Principles of Economics. Full Course.   A. Lallier & A. Takahashi

A survey of the existing economic order, with particular emphasis on the North American Economy. Concentration is on explaining the operation of the price system as it regulates production, distribution, and consumption, and as it in turn is modified and influenced by private organization and government policy. Consideration is also given to the determination of aggregate economic activity. The main areas studied include: the monetary and banking systems in the United States and Canada; the composition and fluctuations of national income; and the major conditions of economic growth; all as influenced by monetary, fiscal and other policies.

Lectures: 3 hours per week for two terms.

202 Economic History. Full Course.   Bernice Wright

An analysis of the development of Western Europe, Canada and the United States.

Lectures: 3 hours per week for two terms.

210 Intermediate Economic Theory. Full Course.   S. Alvi

In this course consideration will be given to such topics as: theory and measurement of demand; production functions; cost analysis; price and output policy under various market conditions; factor pricing; income and employment theory.

Lectures: 3 hours per week for two terms.

*221 Mathematics for Economists. Full Course.

An introductory application of mathematics to economic analysis. Topics: analytic geometry; differential and integral calculus; differential and difference equations; elements of linear algebra. Selected topics of economic applications will be covered throughout the course.

Lectures: 3 hours per week for two terms.

*260 Intermediate Economic Theory. (Honours) Full Course.

Lectures: 3 hours per week for two terms.

*271 Mathematics for Economists. (Honours) Full Course.

Lectures: 3 hours per week for two terms.

303 Theories and Processes of Economic Growth and Development. Full Course.   S. Alvi

A consideration of various contributions by economists and others to an understanding of how societies grow and undergo institutional change. The course also includes a study of the problem of accelerating economic growth, with emphasis on selected developing nations of the present time, an analysis of the process of capital formation, the role of the state (in different politico-economic systems), the role of external assistance in economic development, and the economics of investment decisions. Emphasis is also given to the interaction of the cultural change and economic development.

Lectures: 3 hours per week for two terms.

*Not given in 1970/71.

304 Statistical Methods. Full Course.   Staff

The application of statistical methods to economic problems, including probability, testing hypotheses, time series, correlation and linear regression analysis.

Lectures: 3 hours per week for two terms.

*305 Economic Fluctuations. Full Course.

A review of some theories of courses of Economic Fluctuations. Discussion of the Economic climate and of stabilization policies.

Lectures: 3 hours per week for two terms.

306 Money, Banking, & Income Theory. Full Course.   F. J. Hayes

The functions of money, money and prices; the evolution and kinds of money; the value of money, the supply of money, monetary and banking developments in Canada, the United States and the United Kingdom; the determinants of national income; the multiplier and acceleration principles, monetary and fiscal policy.

Lectures: 3 hours per week for two terms.

333 Comparative Economic Systems. Full Course.   A. Lallier

The evolution of economic systems is discussed and evaluated in terms of modern economic theory, and from the point of view of economic efficiency and development.

Lectures: 3 hours per week for two terms.

348 Labour: Economics & Relations. Full Course.   E. Khan

Origin and development of Canadian, U.S. Labour organizations; contemporary trade union problems; labour laws (U.S., Canada, Quebec) and public policies; collective bargaining and strikes. Determinants of labour demand, labour supply; wage and employment theory; unemployment; manpower policy; income policy. Emphasis is placed on the Canadian context.

Lectures: 3 hours per week for two terms.

354 Statistical Methods. (Honours) Full Course.   A. Takahashi

Lectures: 3 hours per week for two terms.

366 Monetary and Income Theory. (Honours) Full Course.   Bernice Wright

Income determination in a money economy. Some problems, including economic stability, inflation, balance of payments and international liquidity.

Lectures: 3 hours per week for two terms.

407 International Trade. Full Course.   C. Papadantonakis

Historical and economic background of International Trade; the theory of International Trade; balance of payments; international capital movements; foreign exchange; international commercial policies; international organization dealing with commercial theory.

Lectures: 3 hours per week for two terms.

*Not given in 1970/71.

435 Public Finance. Full Course. Bernice Wright

A study of the principles and practices of Public Finance, with special reference to North America.
Lectures: 3 hours per week for two terms.

437 Canadian Economic Policy. Full Course. F. J. Hayes

This course is devoted to examining economic policy in a number of selected areas.
Lectures: 3 hours per week for two terms.

445 Industrial Organization. Full Course. Staff

Theory of the firm; theories of imperfect competition, including some recent theoretical developments in this area; the structure and performance of the Canadian and American industries; determinants of market structure; empirical evidence of pricing and output decision of firms under different market structures; and anti-trust or combines policy and other microeconomic policies.
Lectures: 3 hours per week for two terms.

461 History of Economic Thought. (Honours) Full Course.
A. Lallier

A critical review of economic thought since Plato and Aristotle.
Lectures: 3 hours per week for two terms.

464 Operations Analysis and Economic Theory (Honours) Full Course. C. Papadantonakis

Application of mathematical techniques to economic analysis. Topics will include the Calculus, Theory of Determinants, Programming, etc., and their application to selected areas in Economic Theory; Production and Inventory decisions; Linear Programming; Transportation problems; Queues; Input-output Analysis, Game Theory, Econometric Macromodels.
Lectures: 3 hours per week for two terms.

480 Macro-Economic Analysis. (Honours) Full Course.
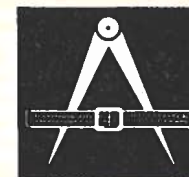A. Takahashi

A critical study of selected topics in Aggregative Economic Analysis.
Lectures: 3 hours per week for two terms.

*Not given in 1970/71

ENGINEERING

FACULTY OF ENGINEERING

Dean	G. W. Joly
Associate Professors	C. Goldman, K. I. Krakow, S.J. Kubina
Assistant Professors	J. A. Krantzberg, V. Stefanovic, Rev. H. Wardell, S.J.
Lecturers	D. Kaufman,
Special Lecturers	C. E. Adkar, S. E. Ahad, C. R. Ahooja, W. Cosgrove, B. Desai, M. Marin, S. A. Neilson, J. E. Orr,

THE OBJECTIVE

The overall objectives of the Faculty of Engineering are the growth and development of the student into a self-identifiable person and the acquisition by him of the knowledge upon which to build his career. In the concrete, these goals are proposed to the student as a personal search for excellence and the forming of himself to manage industry whether technically or administratively.

While the subjects of the curriculum—technology, science, humanities, professional practice—have to be presented as discrete disciplines, the Faculty seeks at all times to make the student aware that he must integrate them into his personality so that they become the foundation for supporting his chief function in society—the making of decisions.

THE PROGRAM

The Faculty of Engineering offers in 1970-71 a program of two cycles: a two year Collegial (CEGEP) program followed by a three year university program. On the succesful completion of the university program, students will be awarded a Bachelor of Science degree. Although the curricula of the programs are designed to enable students to pursue advanced studies in engineering, science or business at other universities, nevertheless, those who do not elect to do so, will find themselves well prepared for a career in industry at a high technological level. Students aspiring to practise as professional engineers on graduation are advised to register in an option marked DESIGN.

THE CURRICULA

Students accepted for registration in the Collegial Program in Engineering in September are enrolled in the two-year program, a program which is parallel to the one offered in the Colleges d'Education General et Professionnel (CEGEP). On the successful completion of it, students will be admitted to a three year university program of engineering. The first year of it will be common to all students; the two upper years will be specialized. During the Collegial years and the first (common) year of the university program, stu-

dents are encouraged to familiarize themselves with the option of the upper two years of the university. The Dean and his colleagues invite all students to consult them about these options.

Applications are invited for the University cycle from graduates of Collegial programs completed outside of Loyola.

A student completing the first year of university may select one of the following options to follow in the upper years.

CHEMICAL ENGINEERING

The Chemical Engineering Curriculum has been prepared for students whose goal is the development, design, operation and management of plants in the chemical and industrial field.

CIVIL ENGINEERING (DESIGN)

The Civil Engineering Curriculum (Design) has been prepared for students whose goal is either the design of structures or the design and control of engineering systems.

ELECTRICAL ENGINEERING

A. Design

The curriculum offers a core of electrical engineering subjects and reasonable depth of study in physics and applied mathematics. Selected electives can be used by the student to open the way for graduate study in some of the modern technological areas such as solid state physics and systems.

B. Computation

The option in Engineering Computation is designed for those engineering students who wish to specialize in the expanding field of computer technology. The curriculum has a strong engineering content integrated with courses in electronics, computers and engineering computation to provide a good introduction to the field of computer-aided design in the major fields of engineering.

MECHANICAL ENGINEERING

A. Design

The curriculum in Mechanical Engineering (Design) is concerned with the generation and utilization of power, the design and operation of mechanical devices.

B. Industrial Engineering

This program is designed for students who are mainly interested in the production and supervisory aspects of Engineering. It is built on a strong foundation of basic engineering principles in the field of Mechanical Engineering.

C. Engineering Administration

This curriculum is designed for those students who while making the administration of industry their goal nevertheless consider that their success will depend on a sound grasp of the increasingly high technological content of industry, especially in Mechanical Engineering.

PROMOTION

For promotion, an overall average of at least 60% of the weighted marks is required, and at least 50% in each separate examination. A student who fails to achieve promotion and wishes to discuss the possibility of continuing his academic career in the Faculty of Engineering must apply IN WRITING to the Dean, Engineering, before July 15.

ADMISSION TO THE UNIVERSITY

1. For graduates of a CEGEP or Collegial program

1. The applicant must have followed a Science-Engineering curriculum.
2. The applicant must have achieved at least the minimum mark required by the Ministry of Education of Quebec for graduation from the Science-Engineering curriculum of a CEGEP.

2. For engineering students of other universities.

The applicant should WRITE to the Dean of Engineering, Loyola of Montreal for information.

*University I. ENGINEERING

COURSE		Course Number	Weighted Mark	Lecture hours per week		Lab. hours per week	
				First Term	Second Term	First Term	Second Term
Mechanics II		E-011	75	3	—	—	—
Strength of Materials		E-031	75	—	3	—	—
Engineering Problems		E-111	25	—	—	2	—
Numerical Analysis		E-131	50	2	—	—	—
Professional Practice		E-311	50	1	1	—	—
Materials Science		E-801	100	2	2	—	—
Differential Equations		M-312	100	2	2	—	—
Calculus		M-	100	2	2	—	—
**Humanities		—	100	3	3	—	—
PLUS							
EITHER	Humanities	—	100	3	3	—	—
OR	Modern Physics	P-303	100	—	3	—	—
PLUS							
EITHER	Circuit Analysis and	E-631	75	2	—	3	—
	Electrical Engineering	E-641	100	—	3	—	3
OR	Circuits & Electronics	E-621	175	2	3	3	3
TOTAL:			950	20	19	5	3

*To commence in 1971/72.
**In Faculty of Arts. Lecture schedule may limit choice. EARLY consultation with Engineering staff is invited.

Third Year CHEMICAL ENGINEERING*

COURSE	Course Number	Weighted Mark	Lecture hours per week		Lab. hours per week	
			First Term	Second Term	First Term	Second Term
Strength of Materials	E-013	50	2	—	—	—
Numerical Analysis & Computation	E-131	75	2	—	—	—
Circuit Analysis	E-631	75	2	—	3	—
Electrical Engineering	E-641	100	—	3	—	3
Thermodynamics & Fluid Mechanics	E-714	150	2	2	2	2
Inorganic Quantitative Analysis	C-212	100	1	1	3	3
Physical Chemistry Laboratory	C-334	100	—	—	4	—
Differential Equations	M-312	100	2	2	—	—
Theology	—	100	2	2	—	—
PLUS						
EITHER Engineering Mathematics	M-313	100	2	2	—	—
OR Organic Chemistry	C-221	100	3	3	—	—
TOTAL:		950	15/16	12/13	12	8

*Terminates in 1970/71.

Fourth Year CHEMICAL ENGINEERING*

COURSE	Course Number	Weighted Mark	Lecture hours per week		Lab. hours per week	
			First Term	Second Term	First Term	Second Term
Control Systems	E-134	75	3	—	—	—
**Technical Report	E-314	100	—	—	—	—
Experimental Engineering	E-704	50	1	—	2	—
Heat Transfer	E-753	50	—	2	—	—
Accounting	A-310	100	2	2	—	—
Organic Chemistry Laboratory	C-222	50	—	—	3	3
Thermodynamics	C-322	75	3	—	—	—
Probability & Statistics	M-201	100	3	3	—	—
***Engineering Mathematics	M-313	100	2	2	—	—
Philosophy	—	100	2	2	—	—
PLUS						
EITHER Industrial Chemistry	C-314	100	2	2	—	—
OR Organic Chemistry	C-221	100	3	3	—	—
TOTAL:		800	16/17	11/12	5	3

*Terminates 1971/72.
**Prepared in Summer preceding Year 4.
***Not required in 1970/71. Optional with C-314 and C-221 in 1971/72.

Third Year CIVIL ENGINEERING — Design*

COURSE	Course Number	Weighted Mark	Lecture hours per week		Lab. hours per week	
			First Term	Second Term	First Term	Second Term
Strength of Materials II	E-033	100	2	2	—	—
Strength of Materials Laboratory	E-043	25	—	—	—	3
Mechanics of Machines	E-053	100	3	—	3	—
Numerical Analysis	E-131	75	2	—	—	—
Surveying	E-523	75	2	—	2	—
Circuit Analysis	E-631	75	2	—	3	—
Electrical Engineering	E-641	100	—	3	—	3
Geology	G-202	100	—	3	—	3
Differential Equations	M-312	100	2	2	—	—
Engineering Mathematics	M-313	100	2	2	—	—
Theology	—	100	2	2	—	—
TOTAL:		950	17	14	8	9

*Terminates in 1970/71. Replaced by University I in 1972/73.

Fourth Year CIVIL ENGINEERING — Design*

COURSE	Course Number	Weighted Mark	Lecture hours per week		Lab. hours per week	
			First Term	Second Term	First Term	Second Term
Strength of Materials	E-034	50	2	—	—	—
Mechanics of Machines	E-054	50	2	—	—	—
Structural Analysis	E-174	100	1	1	2	2
Structural Design	E-214	150	2	2	3	3
**Technical Report	E-314	100	—	—	—	—
Soil Mechanics	E-524	75	—	2	—	3
Thermodynamics & Fluid Mechanics I	E-714	150	2	2	2	2
Mechanical Engineering Laboratory	E-734	25	—	—	—	3
Philosophy	—	100	2	2	—	—
TOTAL:		800	11	9	7	13

*Terminates in 1971/72. Replaced by University II in 1973/74.
**Prepared in Summer preceding Fourth Year.

Third Year — ELECTRICAL ENG. — "A" — Design*

COURSE	Course Number	Weighted Mark	Lecture hours per week		Lab. hours per week	
			First Term	Second Term	First Term	Second Term
Strength of Materials	E-033	100	2	2	—	—
Strength of Materials Lab.	E-043	25	—	—	—	3
System Analysis	E-103	100	2	2	—	—
Numerical Analysis	E-131	75	2	—	—	—
Circuit Analysis & Electronics	E-621	150	2	3	3	3
Solid State Physics	E-653	75	—	3	—	—
Differential Equations	M-312	100	2	2	—	—
Engineering Mathematics	M-313	100	2	2	—	—
Modern Physics	P-303	100	3	—	—	—
Theology	—	100	2	2	—	—
TOTAL:		925	17	16	3	6

*Terminates in 1970/71. Replaced by University I in 1972/73.

Fourth Year — ELECTRICAL ENG. — "A" — Design*

COURSE	Course Number	Weighted Mark	Lecture hours per week		Lab. hours per week	
			First Term	Second Term	First Term	Second Term
Control & Simulation Laboratory	E-124	75	—	2	—	3
Control Systems	E-134	75	3	—	—	—
**Technical Report	E-314	100	—	—	—	—
Electronic Circuits & Devices	E-624	100	—	3	—	3
Signal Processing	E-654	75	—	3	—	—
Electrical Machines	E-664	75	2	—	3	—
Electromagnetic Theory	E-674	100	3	—	—	—
Switching Circuits	E-684	75	2	—	3	—
Thermodynamics & Fluid Mechanics I	E-714	150	2	2	2	2
Probability & Statistics	M-201	100	3	3	—	—
Philosophy	—	100	2	2	—	—
TOTAL:		1025	17	15	8	8

*Terminated in 1971/72. Replaced by University II in 1973/74.
**Prepared in Summer preceding Year 4.

Third Year — ELECTRICAL ENG. — "B" — Computation*

COURSE	Course Number	Weighted Mark	Lecture hours per week		Lab. hours per week	
			First Term	Second Term	First Term	Second Term
Strength of Materials I	E-033	100	2	2	—	—
Strength of Materials Lab.	E-043	25	—	—	—	3
Systems Analysis	E-103	100	2	2	—	—
Numerical Analysis	E-131	75	2	—	—	—
Circuit Analysis	E-631	75	2	—	3	—
Electrical Engineering	E-641	100	—	3	—	3
Differential Equations	M-312	100	2	2	—	—
Engineering Mathematics	M-313	100	2	2	—	—
Theology	—	100	2	2	—	—
PLUS						
EITHER Accounting	A-310	100	3	3	—	—
OR Economics	Ec-100	100	3	3	—	—
TOTAL:		875	17	16	3	6

*Terminates in 1970/71. Replaced by University I in 1972/73.

Fourth Year — ELECTRICAL ENG. — "B" — Computation*

COURSE	Course Number	Weighted Mark	Lecture hours per week		Lab. hours per week	
			First Term	Second Term	First Term	Second Term
Control & Simulation Laboratory	E-124	75	—	2	—	3
Control Systems	E-134	75	3	—	—	—
Introduction to Digital Computer Engineering	E-154	100	2	2	—	—
Digital Computer Applications in Engineering	E-164	125	2	2	3	3
**Technical Report	E-314	100	—	—	—	—
Switching Circuits	E-684	75	2	—	3	—
Thermodynamics & Fluid Mechanics I	E-714	150	2	2	2	2
Probability & Statistics	M-201	100	3	3	—	—
Philosophy	—	100	2	2	—	—
***Elective	—	—	—	—	—	—
TOTAL:		900	16	13	8	8

*Terminates in 1971/72. Replaced by University II in 1973/74.
**Prepared in Summer preceding Year 4.
***Subject to timetable feasibility and the approval of the Dean, the student may elect to take an additional course such as P-303, E-624, EC-100, EC-200.

Third Year — MECHANICAL ENG. — "A" — Design*

COURSE	Course Number	Weighted Mark	Lecture hours per week		Lab. hours per week	
			First Term	Second Term	First Term	Second Term
Strength of Materials	E-033	100	2	2	—	—
Strength of Materials Laboratory	E-043	25	—	—	—	3
Mechanics of Machines I	E-053	100	3	—	3	—
Numerical Analysis	E-131	75	—	2	—	3
Mechanical Design	E-203	50	—	1	—	3
Circuit Analysis	E-631	75	2	—	3	—
Planning & Technology of Manufacturing	E-713	50	—	2	—	—
Thermodynamics & Fluid Mechanics I	E-714	150	2	2	2	2
Materials Science Laboratory	E-833	25	—	—	3	—
Differential Equations	M-312	100	2	2	—	—
Engineering Mathematics	M-313	100	2	2	—	—
Theology	—	100	2	2	—	—
TOTAL:		950	15	15	11	8

*Terminates in 1970/71. Replaced by University I in 1972/73.

Fourth Year — MECHANICAL ENG. — "A" — Design*

COURSE	Course Number	Weighted Mark	Lecture hours per week		Lab. hours per week	
			First Term	Second Term	First Term	Second Term
Mechanics of Machines II	E-054	50	2	—	—	—
****Systems Analysis	E-103	100	2	2	—	—
Advanced Systems Analysis	E-113	50	—	2	—	—
Control Systems	E-134	75	3	—	—	—
Mechanical Design II	E-204	150	2	2	3	3
**Technical Report	E-314	100	—	—	—	—
Electrical Engineering	E-641	100	—	3	—	3
****Experimental Engineering	E-704	50	1	—	2	—
***Thermodynamics & Fluid Mechanics I	E-714	150	2	2	2	2
Thermodynamics & Fluid Mechanics II	E-724	150	2	2	2	2
Mechanical Engineering Laboratory	E-734	25	—	—	—	3
Heat Transfer	E-753	50	—	2	—	—
Philosophy	—	100	2	2	—	—
TOTAL:		1000	13	15	7	13

*Terminates in 1971/72. Replaced by University II in 1973/74.
**Prepared in Summer preceding Year 4.
***In 1970/71 only.
****Not required in 1970/71.

Third Year — MECHANICAL ENG. — "B" — Industrial Engineering*

COURSE	Course Number	Weighted Mark	Lecture hours per week		Lab. hours per week	
			First Term	Second Term	First Term	Second Term
Strength of Materials I	E-033	100	2	2	—	—
Strength of Materials Laboratory	E-043	25	—	—	—	3
Mechanics of Machines	E-053	100	3	—	3	—
Numerical Anslysis	E-131	75	—	2	—	—
Mechanical Design	E-203	50	—	1	—	3
Circuit Analysis	E-631	75	2	—	3	—
Planning & Technology of Manufacturing	E-713	50	—	2	—	—
Economics	Ec-100	100	3	3	—	—
Probability & Statistics	M-201	100	3	3	—	—
Differential Equations	M-312	100	2	2	—	—
Theology	—	100	2	2	—	—
TOTAL:		875	17	17	6	6

*Terminates in 1970/71. Replaced by University I in 1972/73.

Fourth Year — MECHANICAL ENG. — "B" — Industrial Engineering*

COURSE	Course Number	Weighted Mark	Lecture hours per week		Lab. hours per week	
			First Term	Second Term	First Term	Second Term
Control Systems	E-134	75	3	—	—	—
Mechanical Design II	E-204	150	2	2	3	3
**Technical Report	E-314	100	—	—	—	—
Electrical Engineering	E-641	100	—	3	—	3
Experimental Engineering	E-704	50	1	—	2	—
Thermodynamics & Fluid Mechanics I	E-714	150	2	2	2	2
Materials Science Laboratory	E-833	25	—	—	3	—
Accounting	A-310	100	3	3	—	—
Administrative Practices	B-306	100	3	3	—	—
Engineering Mathematics	M-313	100	2	2	—	—
Philosophy	—	100	2	2	—	—
TOTAL:		1050	18	17	10	8

*Terminates in 1971/72. Replaced by University II in 1973/74.
**Prepared in summer preceding fourth Year.

Third Year — MECHANICAL ENG. — "C" — Engineering Administration*

COURSE	Course Number	Weighted Mark	Lecture hours per week		Lab. hours per week	
			First Term	Second Term	First Term	Second Term
Strength of Materials I	E-033	100	2	2	—	—
Strength of Materials Laboratory	E-043	25	—	—	—	3
Mechanics of Machines	E-053	100	3	—	3	—
Numerical Analysis	E-131	75	—	2	—	—
Mechanical Design	E-203	50	—	1	—	3
Circuit Analysis	E-631	75	2	—	3	—
Planning & Technology of Manufacturing	E-713	50	—	2	—	—
Economics	Ec-100	100	3	3	—	—
Probability & Statistics	M-201	100	3	3	—	—
Differential Equations	M-312	100	2	2	—	—
Theology	—	100	2	2	—	—
TOTAL:		875	17	17	6	6

*Terminates in 1970/71. Replaced by University II in 1972/73.

Fourth Year — MECHANICAL ENG. — "C" — Engineering Administration*

COURSE	Course Number	Weighted Mark	Lecture hours per week		Lab. hours per week	
			First Term	Second Term	First Term	Second Term
Control Systems	E-134	75	3	—	—	—
**Technical Report	E-314	100	—	—	—	—
Electrical Engineering	E-641	100	—	3	—	3
Thermodynamics & Fluid Mechanics I	E-714	150	2	2	2	2
Accounting	A-310	100	3	3	—	—
Administrative Practices	B-306	100	3	3	—	—
Operations Analysis	B-464	100	3	3	—	—
Production Management	B-470	100	3	3	—	—
Philosophy	—	100	2	2	—	—
TOTAL:		925	19	19	2	5

*Terminates in 1971/72. Replaced by University II in 1973/74.
**Prepared in summer preceding fourth Year.

APPLIED MECHANICS

002 Mechanics II.
C. Goldman

The three general approaches to dynamics: torque and inertia-acceleration, work and kinetic energy, impulse and momentum. The selection of the appropriate general approach in each problem is emphasized and numerical results are expected.
Lectures: 2 hours per week, both terms.

013 Strength of Materials I.
J. Krantzberg

Elastic theory of matter; thermal, axial, bending, and shear stress. Deflection of beams by differential equation of elastic line, and by moment-area. Reinforced concrete beams.
Lectures: 2 hours per week, first term.

033 Strength of Materials II.
J. Krantzberg

Elastic and plastic properties of materials; axial, thermal, bending, shear, and torsion stresses; deflection of beams by differential equation of elastic line, and moment area; simple, fixed, and continuous beams; reinforced concrete beams; principal stresses and Mohr's circle; columns.
Lectures: 2 hours per week, both terms.

034 Strength of Materials III.
C. Goldman

Unsymmetrical bending, shear centre; curved beams; beams on continuous elastic supports; energy methods; failure theories.
Lectures: 2 hours per week, first term.

043 Strength of Materials Lab.
C. Goldman

Destructive and non-destructive testing; stress analysis using electrical strain gauges and photo stress techniques; properties of brittle and elastic materials.
Lab: 3 hours per week, second term.

053 Mechanics of Machines I.
K. I. Krakow

Analytical and graphical velocity, acceleration and force analysis of mechanisms; static and dynamic balancing of rotating and reciprocating mechanisms; kinematics of gears and gear trains.
Lectures: 3 hours per week, first term.
Problems: 3 hours per week, first term.

054 Mechanics of Machines II.
K. I. Krakow

Vibrations, free, forced, damped; systems having single and multiple degree of freedom; torsional vibration of shafts, critical speed of shafts; flywheel-calculations.
Lectures: 2 hours per week, first term.

ENGINEERING ANALYSIS

103 Systems Analysis.
J. Krantzberg and K. I. Krakow

The application of Mathematics to the solution of Civil, Electrical and Mechanical Engineering problems. Systems of single and multiple degrees of freedom; gyroscopic motion; particle mechanics; theory of fields; unit functions; analogies between mechanical and electrical systems. Laplace Transform methods.

Lectures: 2 hours per week, both terms.

111 Engineering Problems.
J. Krantzberg

Solving of problems in Mechanics and Mathematics. Great emphasis is laid on setting up problems in Engineering.

Problems: 2 hours per week, two terms.

113 Advanced System Analysis.
K. I. Krakow and J. Krantzberg

Application of matrix methods to problems in vibrations; application of numerical methods to problems in fluid mechanics.

Lectures: 2 hours per week, second term.

124 Control & Simulation Laboratory.
D .Kaufman

Measurements on control systems; modelling of control and physical systems; fundamentals of analogue computation; analogue computer simulation of engineering systems.

Lectures: 2 hours per week, second term.

Lab: 3 hours per week, second term.

131 Numerical Analysis and Computation Methods.
S. Kubina

Digital Computer Programming and associated methods of numerical analysis useful in the solution of engineering problems. Laboratory periods are devoted to the solution of problems using digital computers in direct or time-sharing modes.

Lectures: 2 hours per week, first term.
(Repeated second term).

134 Control Systems.
V. Stefanovic

Mathematical Models; Nonlinearity and Linearization. Open and Closed-Loop Control. Sensitivity. Stability and performance criteria. System design by complex plane and frequency response techniques.

Lectures: 3 hours per week, first term.

Text: *Modern Control Systems*, R. C. Dorf.

154 Introduction to Digital Computer Engineering.
C. Ahooja

Fundamental concepts; switching algebra, number systems, codes, arithmetic operations, and principles of logical design. Computer arithmetic and control units, computer memories, stored-program computers. Problem formulation, coding and programming concepts, computer system organization. Examples shall be taken from modern general-purpose computers.

Lectures: 2 hours per week, both terms.

164 Digital Computer Applications in Engineering
B. Desai

Selected Topics in numerical methods for solution of engineering problems, iterative solutions of algebraic and transcendental equations, solutions of systems of linear algebraic equations, matrix manipulation, polynomial curve fitting, solution of ordinary and partial differential equations and of systems of differential equations. Stability and Accuracy of solutions. The methods are illustrated by application to typical engineering problems and to recent techniques in computer-aided design. Applications to engineering management and project control techniques such as CPM, PERT, and PERT/COST are discussed. The important portion of the course involves the analysis and solution of a representative class of problems by the student using the digital computer.

Lectures: 2 hours per week, both terms.

Lab: 3 hours per week, both terms.

174 Structural Analysis.
C. Goldman

Analysis of statically indeterminate structures, moment distribution, slope deflection, virtual work, and strain energy; deflection analysis; influence lines; collapse methods.

Lectures: 1 hour per week, two terms.

Labs: 2 hours per week, two terms.

ENGINEERING DESIGN

203 Mechanical Design I.

Mechanical design projects involving elementary stress analysis and dynamic analysis; design of cams; frictional devices, such as clutches, brakes, belts; relation between design and manufacturing techniques; preparation of design briefs.

Lectures: 1 hour per week, second term.

Problems: 3 hours per week, second term.

204 Mechanical Design II.

Design factors, stress concentration, fatigue, impact; design of belt and chain drives, gears, shafts, bolted, riveted and welded connections, beams (curved and straight) and columns. Design problems related to mechanical engineering involving the application of the theoretical work of Strength of Materials and Mechanics of Machines.

Lectures: 2 hours per week, both terms.

Lab: 3 hours per week, both terms.

214 Structural Design. C. Goldman

Design of tension, compression and flexural members in steel and timber; specifications and codes; riveted, bolted, and welded details; building frames; design of belt and chain drives, gears, shafts; stress concentration, fatigue, impact.

Lectures: 2 hours per week, two terms.

Labs: 3 hours per week, two terms.

PROFESSIONAL PRACTICE

311 Professional Practice II.

The Place of the Engineer in the business world, how companies are organized and run. Consulting engineering and types of organization responsibilities. Engineering economics.

Lectures: 1 hour per week, both terms.

314 Technical Report. S. A. Neilson

Students entering the Fourth Year of Engineering must submit a Technical Report. The most suitable subject for the Report is a topic drawn from the experience during his summer work. If, however, a student's summer experience does not provide a reasonable topic, he may visit and inspect any engineering scientific or industrial project in course of construction or operation, and write upon his observations. The Report should be between 2000 and 4000 words in length and must be handed in not later than Registration Day.

CIVIL ENGINEERING

523 Surveying. W. Cosgrove

Types of survey; description and use of level, compass, transit, chain and tape; levelling; traverses, stadia. Route surveys involving simple, spiral, and vertical curves. Grades, cross-sections, area, and earth-work calculations. Use of planimeter; Triangulation; Hydrographic surveying.

Lectures: 2 hours per week, one term.

Lab: 2 hours per week, one term.

524 Soil Mechanics.

Soil properties and structure; subsurface exploration methods; bearing capacity of soils, soil strength, settlement and consolidation; slope stability; groundwater and seepage: lateral earth pressure theories, design of retaining walls, and footings; foundation types.

Lectures: 2 hours per week, one term.

Labs: 3 hours per week, one term.

ELECTRICAL ENGINEERING

621 Circuit Analysis and Energy Conversion. S. Kubina

The fundamentals of the analysis of linear circuits to study time varying, periodic and non-periodic currents, and voltages; node and loop analysis; network theorems; time frequency domain relationships; polyphase circuits. Fourier series, Laplace transforms; coupling elements and coupled circuits; ideal transformers; controlled sources. Semiconductor electronics. Simple amplifier circuits, frequency response. Simple rectifier and modulator circuits.

Lectures: 2/3 hours per week, two terms.

Lab: 3 hours per week, two terms.

624 Electronic Circuits and Devices. E. Ahad

Device equivalent circuit representations; bias-stabilized transistor amplifiers, frequency response of amplifiers, feedback amplifiers, oscillators, tuned circuits, wide-band amplifiers, multivibrators, pulse circuits, gates and switches, integrated circuits. Modulation and detection circuits.

Lectures: 3 hours per week, second term.

Lab: 3 hours per week, second term.

631 Circuit Analysis. S. Kaufman

Analysis of the response of linear circuits to steady and time varying currents and voltages; node and loop analysis; network theorems; Laplace transforms; polyphase circuits.

Lectures: 2 hours per week, one term.

Lab: 3 hours per week, one term.

641 Electrical Engineering.

Balanced three phase power systems. Magnetic Theory: Ampere's Law, Magnetic Flux, Hysteresis. Characteristics of Transformers, Induction, Synchronous and D.C. Machines. Transistors and their equivalent circuits. Multistage Transistor Amplifiers. Rectifiers; some application of electronic circuits. Logic Circuits. Basis of Control Systems. Analogue Simulation.

Lectures: 3 hours per week, second term.

Lab: 3 hours per week, second term.

653 Solid State Physics. C. K. Adkar

Elementary crystal structure. Waves in periodic media. Lattice vibrations. Free electron models. Thermionic emission. Energy bands. Semiconductors, conduction by holes and electrons, doping, junctions. Magnetic and dielectric properties of solids.

Lectures: 3 hours per week, one term.

654 Signal Processing.

Mathematical representation for signals. Laplace Transforms, series expressions. Fourier transforms, amplitude and phase spectra, convolution and correlation methods, signal, sampling. Amplitude, frequency and phase modulation, demodulation, suppressed band systems, multiplexing, noise spectra, signal detection in the presence of noise.

Lectures: 3 hours per week, second term.

Ref.: Lathi, *Signals, Systems and Communications*; Javid & Brenner, *Analysis, Transmission and Filtering of Signals*.

664 Electrical Machines.   J. Stefanovic

Magnetic Theory: Ampere's Law, Magnetic Flux, Hysteresis. Transformers: Magnetic Coupling, Phasor Diagram, Equivalent Circuits, Characteristics and Testing. Magnetic Amplifiers.
Rotating Electrical Machines: Study of characteristics of the induction, synchronous and D-C Machines. Control Type Machines: Amplidyne. Applications. Speed Controlled Electromotor Drives.

Lectures: 2 hours per week, first term.

Lab: 3 hours per week, first term.

674 Electromagnetic Theory.   C. Adkar

Electrostatic fields, Coulomb's Law, Gauss' Law, Poisson and Laplace equations. Boundary value problems. Magnetostatic fields, Ampere's Laws, Biot-Savart Law. Tune varying fields, Maxwell's equations. Reflection and refraction of plane waves. Applications to engineering problems.

Lectures: 3 hours per week, first term.

684 Switching Circuits.   M. Marin

Digital measurements, switching devices; diode and transistor circuits, switching logic and logic gates; memory elements and multi-vibrators; counters registers and read-outs; digital and analogue-digital instruments and systems. Applications to digital systems, design and interface.

Lectures: 2 hours per week, first term.

Lab: 3 hours per week, first term.

MECHANICAL ENGINEERING

704 Experimental Engineering.   K. I. Krakow

Theory and use of instruments; measurements of temperature, pressure, fluid flow, power; error analysis; displacement, acceleration; use of stroboscope.

Lectures: 1 hour per week, first term.

Lab: 2 hours per week, first term.

713 Planning and Technology of Manufacturing.   A. K. Velan

Review of metals used in industry; their properties and fabricating characteristics; plastics; castings; forgings; welding; cold forming; cutting tools; machine tools; automation and numerical control; inspection and quality control; planning and machine loading.
Machine shop practice: planning and machine loading; machining of components; hardfacing and welding; grinding and lapping; inspection, assembly and testing; tool layout, setup of fully automatic transfer machine; setup of N.C. machine tool.

Lectures: 2 hours per week, second term.

714 Thermodynamics and Fluid Mechanics I.   K. I. Krakow

Dimensional analysis; thermodynamics concepts, properties, processes laws and cycles; non-reacting and reacting mixtures; properties of fluids, hydrostatics, incompressible flow, continuity, conservation of momentum, conservation of energy, concept of laminar and turbulent flow; flow in pipes; open channel flow. Introduction to heat transfer and heat exchanges.

Lectures: 2 hours per week, both terms.

Problems: 2 hours per week, both terms.

724 Thermodynamics and Fluid Mechanics II.   K. I. Krakow

Thermodynamic relationships, advanced problems involving cycles and the first and second laws; similitude; subsonic and supersonic compressible flow; potential flow theory, boundary layer theory, fluid machinery.

Lectures: 2 hours per week, both terms.

Problems: 2 hours per week, both terms.

734 Mechanical Engineering Laboratory.   K. I. Krakow

Experiments relating to thermodynamics, fluid mechanics and heat transfer. Testing of mechanical equipment fans, Diesel engine, reciprocating compressor, boiler, steam turbine, open channel flow, heat exchanger, etc.

Lab: 3 hours per week, second term.

753 Heat Transfer

Steady state and transient conduction; radiation; free and forced convection; boiling and condensation; heat exchanges.

Lectures: 2 hours per week, second term.

MATERIALS SCIENCE

801 Materials Science.   J. E. Orr

A systematic approach to the study of properties and behaviour of engineering materials, including the fundamental properties of materials, metallic phases, multiphase intervals, structural effects on properties, stability under service stresses; thermal, electrical, chemical properties and corrosion; organic and non-metallic materials.

Lectures: 2 hours per week for two terms.

833 Materials Science Laboratory.

J. E. Orr

The metallurgical microscope and its usefulness as a field and research tool to determine the properties of various metals; a study of micro- and macroscopic properties of metals. The effects of deformation and subsequent heat treatment, and the use of heat treating to alter properties of metals. Cooling curves and microscopic examination to establish the phase diagram for a metal alloy.

Laboratory: 3 hours per week, first term.

ENGLISH

Professor (Chairman)	A. G. Hooper
Associate Professors	M. Blanar (on leave), Rev. G. Mac-Guigan, S.J., A. Newell,
Assistant Professors	A. T. Broes, P. Davies, R. K. Martin (on leave), L. P. Nowicki, M. R. Philmus, R. Philmus, L. Rahm, A. N. Raspa, R. S. Wareham, K. Waters, J. P. Zuckermann
Lecturers	T. C. Faulkner, S. Poteet, D. Yates

Courses leading to an Honours B.A. in English

FIRST YEAR	SECOND YEAR**	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	†Classics English (The equivalent of two full courses from 610, 613, 620, 633, 643, 653 673, 674) Philosophy Two Electives	English (The equivalent of three full courses from the list of Honours and Majors Courses*) Philosophy One Elective	English (The equivalent of three full courses from the list of Honours and Majors Courses*) Theology One Elective

*Honours Students must take the equivalent of one full Shakespeare course; of one full pre-seventeenth century course (i.e. one full or two half courses chosen from 704, 730, 733, 734, 765, of which at least one must be 704, 730, or 733); of three full courses including at least a half course from each of the following four areas: seventeenth century, eighteenth century, Romantics, and Victorians; and the equivalent of at least one other full course from the list of Honours and Majors courses.
†Or English 680, or 590, or an approved course in Comparative Literature.
**Not offered 1970-71.

Courses leading to a B.A. with a Major in English

FIRST YEAR	SECOND YEAR**	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Classics English (The equivalent of two full courses from 610, 613, 620, 633, 643, 653, 673, 674) Philosophy French One Elective	English (The equivalent of two full courses from the list of Honours and Major Courses*) Philosophy Two Electives	English (The equivalent of two full courses from the list of Honours and Major Courses*) Theology Two Electives

*Majors must take the equivalent of one full Shakespeare course, of one full course from the seventeenth or eighteenth centuries, of one full course from the Romantics or Victorians, and the equivalent of at least one other full course from the list of Honours and Majors courses.
**Not offered 1970-71.

NOTE 1: In the course of their four-year programme, all students must take at least two courses in Philosophy and two in Theology.

NOTE 2: Students will be encouraged to use electives either to build up a "minor", or to extend the number and scope of their courses in English, or to take courses which are related to and supplement courses already chosen.

NOTE 3: Students planning to go on to graduate studies should consult members of the department in order to try to ensure that their choice of courses will satisfy the requirements of graduate schools.

NOTE 4: Students in their second year who are uncertain whether they will go on to take Honours or to Major in English are advised to satisfy the regulations for Majors by taking a second course in French in their second year.

NOTE 5: A. General courses 200 - 599. Honours and Majors 700 - 999.
B. Final digit 0 indicates a full course. Final digit odd indicates a half course, 1st term. Final digit even indicates a half course, 2nd term.
C. A single decimal (.1, .2) indicates a half course which is repeated.
D. A double decimal (.01, .02) indicates a section.
E. Courses will be in the following order:
General - genre, national, miscellaneous
Honours and Majors - 2nd year, British (by chronological order), other national literatures.

COURSES FOR GENERAL ARTS STUDENTS: ELECTIVES FOR HONOURS AND MAJORS

NOTE: STUDENTS MAY TAKE ONE FULL COURSE OR TWO HALF COURSES.

240 Shakespeare. Full Course. A. Newell

250 Time and the Drama. Full Course. J. Zuckermann

255 Literary Theatre in Theory and Practice. Half Course. First Term. P. Davies

256 Literary Theatre in Theory and Practice. Half Course. Second Term. P. Davies

260 Modern Drama. Full Course. S. Poteet

303 Twentieth-Century American Novel. Half Course. First Term. A. T. Broes

304 Twentieth-Century American Novel. Half Course. Second Term. A. T. Broes

360 Readings in Twentieth-Century Novels. Full Course. A. N. Raspa

380 Modern Fiction. Full Course. T. C. Faulkner

390 Psychological Novel. Full Course. L. P. Nowicki

430 Twentieth-Century British Literature. Full Course. K. Waters

450 British and American Literature. Full Course. A. G. Hooper

490 American Literature. Full Course.

520 Canadian Literature. Full Course.

560 Introduction to Modern World. Full Course. R. Philmus

570 Epic Forms in Literature. Full Course. M. R. Philmus

580 Literature of the Absurd. Full Course. L. Rahm

590 Literature, Ideas and Myths. Full Course. R. S. Wareham

Note: Five to six courses in addition to those above will be listed in the Departmental Supplement at Registration.

COURSES NORMALLY RESTRICTED TO STUDENTS TAKING HONOURS, OR MAJORING, IN ENGLISH

(In special circumstances, other students may be admitted to these courses with the permission of the professor concerned.)

704 Chaucer. Half Course. Second Term. A. G. Hooper

730 Nature and Art in Renaissance Literature. Full Course. R. S. Wareham

733 Spenser and his Background. Half Course. M. R. Philmus

734 Elizabethan Literature. Half Course. M. R. Philmus

740 Shakespeare. Full Course. A. Newell

760 Shakespeare. Full Course. P. Davies

765 Elizabethan and Jacobean Drama. Half Course. First Term. A. G. Hooper

800 The Seventeenth Century. Full Course. A. N. Raspa

813 Earlier Seventeenth-Century Poetry. Half Course. First Term. L. Rahm

814 The Seventeenth-Century. Half Course. Second Term. L. Rahm

840 The Restoration and Eighteenth Century. Full Course.

843 The Augustan Age. Half Course. First Term. R. Philmus

844 The Augustans. Half Course. Second Term. R. Philmus

870 The English Romantic Period. Full Course.

873 English Romantic Poetry. Half Course. First Term.

874 English Romantic Poetry. Half Course. Second Term.

875 Forms of the Fantastic. Half Course. First Term.   S. Poteet

910 Nineteenth-Century Fiction. Full Course.   J. Zuckermann

914 Late Victorian and Edwardian Literature. Half Course. Second
Term.   S. Poteet

943 Twentieth-Century British Literature. Half Course. First Term.
K. Waters

944 Twentieth-Century British Literature. Half Course. Second Term.
K. Waters

973 Nineteenth-Century American Literature. Half Course. First
Term.   L. P. Nowicki

974 American Literature. 1890-1960. Half Course. Second Term.
L. P. Nowicki

975 Twentieth-Century Fiction. Half Course. First Term. A. T. Broes

976 Twentieth-Century Fiction. Half Course. Second Term. A. T. Broes

980 Canadian Literature. Full Course.

Note: Several additional courses will be included in the Departmental Supplement available at Registration.

FRENCH STUDIES — ÉTUDES FRANÇAISES

Professors:	Gustave Labbé
	Arsène Lauzière
	Paul Toupin (on sabbatical leave)
Associate Professors:	Margaret Andersen
	Gaston Laurion (Chairman)
Assistant Professors:	Jean-Pierre Boucher
	Martin Riegel
	César Rouben
	Leonard Sugden (on leave)
	Zobeidah Youssef

Courses leading to an Honours B.A. in French FOR A STUDENT COMPLETING THE FOUR-YEAR PROGRAM.

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
See collegial First Year (French 130 or permission of the Department)	Philosophy Theology Elective Elective FRENCH 232 (formerly 230) FRENCH (the equivalent of one full course from the list of Honours and Major courses, except F. 428, 432, 434, 440)	Philosophy FRENCH (the equivalent of four full courses from the list of Honours and Major courses)	Theology FRENCH 428 (if not yet taken) FRENCH (the equivalent of two full courses from the Honours and Major courses) FRENCH 500: comprehensive examination
5 courses	6 courses	5 courses	5 courses

Courses leading to a B.A. with a Major in French FOR A STUDENT COMPLETING THE FOUR-YEAR PROGRAM.

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
See collegial First Year (French 130 or permission of the Department)	Classics English Philosophy Theology FRENCH 232 (formerly 230) FRENCH (the equivalent of one full course from the Honours and Major courses, except F. 428, 432, 434, 440)	Philosophy Elective Elective FRENCH (the equivalent of two full courses from the Honours and Major courses)	Theology Elective FRENCH (the equivalent of three full courses from the Honours and Major courses: F. 428 is strongly recommended)
5 courses	6 courses	5 courses	5 courses

*Not offered 1970-71

Courses leading to a B.A. with a double Major in French and one of the Modern Languages FOR A STUDENT COMPLETING THE FOUR-YEAR PROGRAM

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
See collegial First Year (French 130 or permission of the Department)	Classics English Philosophy FRENCH 232 (formerly 230) Modern Language (two full courses)	Philosophy Theology FRENCH (two full courses from the list of Honours and Major courses) Modern language (one full course)	Theology FRENCH (two courses from the list of Honours and Major courses) Modern language (two full courses)
5 courses	6 courses	5 courses	5 courses

*Not offered 1970-71.

Note 1. Students honouring in French are strongly advised to take one full course on each century (for the XVIIth Century: half course 321 and another half course) and on French Canadian literature.

Note 2. Students majoring in French will normally take one full course on each of the XVIIth, XVIIIth, XIXth and XXth Centuries and on French Canadian literature.

Note 3. Students majoring both in French and Modern Languages will normally take one full course on each of the XVIIth, XVIIIth, XIXth and XXth centuries.

Note 4. Students honouring and majoring in French, or in French and Modern Languages will have a faculty advisor with whom they should consult for their selection of courses. Honours students will also consult their advisor to prepare the reading list required for F. 500.

Note 5. In the course of their four-year programme all students must take two courses in Theology and two in Philosophy.

Note 6. Courses with an even number are full courses; those with an odd number are half courses.

Note 7. "a" indicates first term, "b" second term in case of half courses.

Note 8. Students who register for their final year should select their courses in consultation with the chairman of the Department. THEY are responsible for making sure that they will have fulfilled all the requirements.

MAJOR AND HONOURS COURSES

(With the permission of the Department, these courses may be exceptionally taken by students who are not registered for a Major or an Honours B.A.)

232 Composition, grammaire avancée et méthodologie.   Staff

Travaux pratiques portant sur la dissertation, la grammaire avancée et la méthodologie des études littéraires.

Dès leur inscription au Département, les étudiants Honours et Major French suivront ce cours, qui sera éliminatoire.

3 h. par semaine.

233 Stylistique: Principes généraux et travaux pratiques.

(Not to be given in 1970-71)

Textes: Courault, *L'Art d'écrire.*

3 h. par semaine; un semestre.

235 Création littéraire.

(Not to be given in 1970-71)

3 h. par semaine; un semestre.

321b Littérature du XVIIe Siècle.
Le théâtre et la dramaturgie classiques:
Corneille, Racine, Molière.   Z. Youssef

Textes: *Polyeucte; Britannicus; L'École des femmes;* Lagarde & Michard, *XVIIe Siècle.*

3 h. par semaine; un semestre.

323a Littérature du XVIIe Siècle:
Les moralistes, les penseurs et les orateurs   Z. Youssef

Textes: Descartes, *Le discours de la Méthode;* Pascal, *Pensées;* La Rochefoucauld, *Maximes;* Bossuet, *Oraisons funèbres* et *Sermons;* La Bruyère, *Les Caractères;* Lagarde et Michard, *XVIIe Siècle.*

3 h. par semaine; un semestre.

325 Littérature du XVIIe Siècle:
La fable, le roman, la littérature
épistolaire, les mémoires.

(Not to be given in 1970-71)

Textes: La Fontaine, *Fables;* Mme de Lafayette, *La Princesse de Clèves;* Mme de Sévigné, *Lettres;* Retz, *Mémoires;* Lagarde et Michard, *XVIIe Siècle.*

3 h. par semaine; un semestre.

332 Littérature du XVIIIe Siècle: Le roman et le
théâtre au XVIIIe Siècle.   C. Rouben

Textes: Lesage, *Gil Blas;* Prévost, *Manon Lescaut;* Marivaux, *Le Paysan Parvenu, Le Jeu de l'Amour et du Hasard;* Montesquieu, *Lettres Persanes;* Voltaire, *Zadig, Candide;* Diderot, *Le Neveu de Rameau;* Rousseau, *La Nouvelle Héloïse;* Bernardin de Saint-Pierre, *Paul et Virginie;* Beaumarchais, *Le Mariage de Figaro;* Lagarde et Michard, *XVIIIe Siècle.*

3 h. par semaine.

334 Littérature du XVIIIe Siècle: Histoire
des idées au XVIIIe Siècle.

(Not to be given in 1970-71)

Textes: Fontenelle, *Histoire des Oracles;* Montesquieu, *Lettres Persanes;* La Mettrie, *L'Homme machine;* L'Encyclopédie, Morelly, *Code de la nature;* Helvétius, *Textes choisis;* Rousseau, *Contrat social;* d'Holbach, *Textes choisis;* Diderot, *Entretien entre d'Alembert et Diderot; Supplément au voyage de Bougainville;* Voltaire, *Dictionnaire Philosophique.*

3 h. par semaine.

341a Littérature du XIXe Siècle. Chateaubriand,
Constant, Vigny, Balzac, Stendhal: le roman
de l'inquiétude et de l'énergie.   A. Lauzière

Textes: Chateaubriand, *René;* Constant, *Adolphe;* Vigny, *Servitude et grandeur militaires;* Balzac, *Le Père Goriot;* Stendhal, *Le Rouge et le Noir.*

3 h. par semaine; un semestre.

343a Littérature du XIXe Siècle. Flaubert, Zola, Huysmans: le roman réaliste, naturaliste et décadent.   A. Lauzière

Textes: Flaubert, *Madame Bovary, L'Éducation sentimentale*; Zola, *L'Assommoir, Germinal*; Huysmans, *À Rebours, Là-bas*; Bourget, *Le Disciple*.
3 h. par semaine; un semestre.

345b Littérature du XIXe Siècle. Le Romantisme: la poésie et le théâtre.   A. Lauzière

Textes: Hugo, *Ruy Blas*; Musset, *Lorenzaccio*; Poèmes choisis de Hugo, Lamartine, Vigny et Musset; Lagarde et Michard, *XIXe Siècle*.
3 h. par semaine; un semestre.

347b Littérature du XIXe Siècle. La poésie à partir de Baudelaire.   A. Lauzière

Théophile Gautier, Gérard de Nerval, Leconte de Lisle, Hérédia, Baudelaire, Rimbaud, Verlaine, Mallarmé.
3 h. par semaine; un semestre.

350 Théâtre et diction

(Not to be given in 1970-71)
L'inscription ne vaut qu'avec l'approbation du professeur, de plus, elle est limitée. La présence aux cours est *obligatoire*. Les étudiants présenteront une pièce au premier semestre et une autre au second semestre. Ils choisiront, avec le professeur, les pièces à présenter.

360 Littérature canadienne: Le roman et le conte.   J-P. Boucher

Origines, influences, évolution. Etude d'oeuvres modernes. Textes: Savard, *Menaud maître-draveur*; Ringuet, *Trente Arpents*; Roy, *Bonheur d'occasion*; Lemelin, *Au pied de la pente douce*; Langevin, *Poussière sur la ville*; Thériault, *Agakuk*; Bessette, *Le libraire*; Blais, *Une saison dans la vie d'Emmanuel*; Ducharme, *L'Avalée des avalés*; Ferron, *Contes* (éd. intégrale).
3 h. par semaine

364 Littérature canadienne: La poésie. Origines et influences: évolution thématique et esthétique.   G. Labbé

Textes: Fréchette, Morin, Lozeau, Choquette (Coll. Classiques Canadiens); Nelligan, *Poésies Complètes*; Desrochers, *À l'Ombre de l'Oxford*; Hertel, *Poèmes d'hier et d'aujourd'hui*; Saint-Denys Garneau, *Poésies complètes*; Grandbois, *Poésies*; Hébert, *Poèmes*; Lapointe, G., *Ode au Saint-Laurent*; Chamberland, P., *Terre Québec*; Sylvestre, G., *Anthologie de la poésie canadienne-française*; Tougas, G., *Histoire de la littérature canadienne-française*.
Leçons, séances de travaux pratiques et travaux de recherche.
3 h. par semaine.

367 Littérature canadienne: le théâtre.

(Not to be given in 1970-71)
3 h. par semaine; un semestre.

380 Littérature comparée: Les grands courants de la littérature moderne.

(Not to be given in 1970-71)
Etude comparée de quelques oeuvres des XIXe et XXe Siècles. Cours, séminaires et conférences de professeurs invités.
Textes: Goethe, *Les Souffrances du jeune Werther*; Stendhal, *Lamiel*; Tourgueniev, *Premier Amour*; Ibsen, *La Maison de Poupée*; Henry James, *Daisy Miller and other short stories*; Kafka, *Le Procès*; A. Breton, *Nadja*; Ezra Pound, *Selected Poems*; Camus, *L'Exil et le Royaume*; Beckett, *En attendant Godot*.
3 h. par semaine.

428 Langue: Histoire de la langue et linguistique.   M. Riegel

Introduction aux sciences de la linguistique. Histoire de la langue française. Cours obligatoire pour les étudiants "Honours" et fortement recommandé aux "Majors". Textes: F. de Saussure, *Cours de linguistique générale*; J. Perrot, *La linguistique*; P. Guiraud, *La sémantique, La syntaxe du français, L'Ancien français*; A. Dauzat, *Tableau de la langue française*.
3 h. par semaine.

432 Littérature du Moyen Age.   G. Laurion

Initiation à la langue et à la littérature du Moyen Age. Choix d'œuvres épiques, romanesques et lyriques.
Textes: *La Chanson de Roland; Tristant et Iseut*; Chrétien de Troyes, *Yvain; La Chastelaine de Vergi*; Ruteboeuf, *Poèmes concernant l'Université*; Villon, *Poésies*; Lagarde et Michard, *Le Moyen Age*. Leçons et séances de travaux pratiques.
3 h. par semaine.

434 Littérature du XVIe Siècle: La Renaissance et l'humanisme en France.   M. Riegel

Prose et poésie. Origines, évolution et oeuvres maîtresses.
Textes: Rabelais, *Gargantua*; Du Bellay, *Défense et Illustration de la langue française, Regrets*; Ronsard, *Les Amours*; Montaigne, *Les Essais*; D'Aubigné, *Les Tragiques*; Lagarde et Michard, *XVIe Siècle*.
3 h. par semaine.

440 Littérature du XXe Siècle: La Poésie.

(Not to be given in 1970-71)
Evolution. Nouvelles tendances.
Textes: Claudel, *Cinq grandes odes*; Valéry, *Poésies*; Apollinaire, *Alcools*; Breton, *Clair de Terre*; Eluard, *Capitale de la douleur*; Char, *Le poème pulvérisé*; Michaux, *Plume*; Ponge, *Le parti-pris des choses*; Breton, *Les Manifestes du surréalisme*.
3 h. par semaine.

442 Littérature du XXe Siècle: Le roman.   G. Labbé

Evolution. Structure et techniques. Thèmes.
Textes: Alain-Fournier, *Le Grand Meaulnes*; Gide, *La Porte Etroite*; Proust, *Du Coté de chez Swann*; Mauriac, *Thérèse Desqueyroux*; Bernanos, *Journal d'un curé de campagne*; Malraux, *La Condition humaine*; Camus, *L'Etranger*; Sartre, *La Nausée*. Le nouveau roman. Lagarde et Michard, *XXe Siècle*.
3 h. par semaine.

443b Littérature du XXe Siècle: L'Existentialisme.   M. Andersen

Textes: Montherlant, *Service inutile, Les Bestiaires*; Malraux, *Les Conquérants, La Condition Humaine*; Sartre, *La Nausée, L'Existentialisme est un humanisme*; Simone de Beauvoir, *L'Invitée*; Camus, *L'Etranger, L'Homme révolté*; Beckett, *Molloy*.
3 h. par semaine.

445a Littérature du XXe Siècle: Le théâtre.   M. Andersen

Textes: Jarry, *Ubu*; Claudel, *L'Annonce faite à Marie*; Giraudoux, *La Guerre de Troie n'aura pas lieu*; Anouilh, *Beckett*; Montherlant, *La Reine morte*; Sartre, *Huis Clos*; Beckett, *Fin de partie*; Ionesco, *Rhinocéros*; Genêt, *Le Balcon*.
3 h. par semaine.

451 Traduction avancée de textes littéraires de l'anglais au français.

(Not to be given in 1970-71)
3 h. par semaine; un semestre.

470 Civilisation française.   J-C. Badin

Le monde français: ses principales caractéristiques; unité et diversité. Les aspects de la France: les hommes, l'âme, la langue, les provinces.
La vie économique, politique et sociale de la France.
La vie intellectuelle, artistique et spirituelle de la France. L'évolution de la France.
Le monde français et l'Amérique du Nord (le Canada): quelques comparaisons.
Textes: Camille Bauer, *Panorama de la France moderne*; Guy Michaud, *Guide France*.
3 h. par semaine.

500 Examen oral de fin d'études.   G. Laurion and Staff

Pendant leur quatrième année, les étudiants "Honours" devront subir un examen oral devant jury portant sur 30 volumes choisis sur une liste de 75 à 100 titres et répartis sur tous les siècles. La réussite à cet examen donnera aux étudiants un "crédit" qui sera leur onzième au Département d'Etudes Françaises.

ELECTIVE COURSE

600 Special course for upperclassmen.   C. Rouben and Staff

This course is designed for upperclassmen neither majoring nor honouring in French who have already fulfilled the French requirements for their degree and wish to improve their working knowledge of the language. Special permission can also be granted by the department to a limited number of students who wish to take this course as their second French requirement.

The program involves: 1. a practice oriented review of the important structures of the French language. 2. readings of present-day topics regarding French and French Canadian civilizations. 3. readings in French for the Humanities, the Natural Sciences or the business world according to the Faculty in which the students are enrolled. 4. Translation.

Courses are conducted in French and emphasize the "using stage" of the language rather than the "learning stage". The students are advised to register only if they have reached the "using stage" of the language.

NON-CREDIT COURSE

Corrective Phonetics.   M. Andersen

A course offered to all faculty and students who have some knowledge of French. It aims at correcting their pronunciation of French and at increasing their fluency in speaking that language. The course takes place in the language laboratory.
1 hour per week, 2 terms.

GEOTECHNICAL SCIENCE

Associate Professor	E. H. Chown
(Chairman, effective August 1, 1970)	
Professor	D. J. McDougall
Assistant Professors	J. T. Jenkins, K. K. Mukherji
Senior Instructor	J. P. Mills

Courses leading to a B.Sc. with a major in Geotechnical Science**

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR***
Discontinued — See Collegial Program	Chem. 211	Chem. 231	GEOT. Sc. 401†*
	Chem. 212	Engineering 802	GEOT. Sc. 402
	GEOT. Sc. 203	GEOT. Sc. 301	GEOT. Sc. 403
	GEOT. Sc. 205	GEOT. Sc. 302	GEOT. Sc. 404
	GEOT. Sc. 206	GEOT. Sc. 303	GEOT. Sc. 405
	GEOT. Sc. 207	GEOT. Sc. 304	GEOT. Sc. 406
	GEOT. Sc. 208	GEOT. Sc. 305	GEOT. Sc. 408
	GEOT. Sc. 209	GEOT. Sc. 306	Philosophy or
	Mathematics 202	Philosophy	Theology
	Philosophy	Physics 206	
	Theology		

*Not offered 1970-71.

**Students planning to continue in Geotechnical Science are normally advised to take Geotechnical Science 101 and 102, or equivalent, in Collegial II.

***In the fourth year, qualified students may be permitted to take additional courses in either Chemistry, Engineering, Mathematics, or Physics.

†For 1970-71 only. Students expecting to graduate in 1971 will take Geotechnical Science 208 in place of Geotechnical Science 401.

Courses of the General Science Programme in Geotechnical Science leading to a B.Sc.**

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Chemistry 211	Chemistry 231	English
	Chemistry 212	GEOT. Sc. 301	GEOT. Sc. 404
	GEOT. Sc. 203	GEOT. Sc. 302	and either (a),
	GEOT. Sc. 205	GEOT. Sc. 303	(b) or (c)
	GEOT. Sc. 208	GEOT. Sc. 403	(a) GEOT. Sc. 405
	GEOT. Sc. 209	Philosophy	One Science
	Mathematics 202	One Science Elective***	Elective***
	Philosophy		(b) GEOT. Sc. 401†*
	Theology		GEOT. Sc. 305
			One Science
			Elective***
			(c) GEOT. Sc. 206
			GEOT. Sc. 306
			GEOT. Sc. 406
			Philosophy or
			Theology

*Not offered 1970-71.

**Students planning to continue in Geotechnical Science are normally advised to take Geotechnical Science 101 and Geotechnical Science 102, or equivalent, in Collegial II.

***Elective chosen must be approved by Department.

†For 1970-71 only. Students expecting to graduate in 1971 will take Geotechnical Science 208 in place of Geotechnical Science 401.

FIELD TRIPS AND FIELD SCHOOLS

Lectures and laboratory cannot successfully substitute for actual observation of geology in the field. Therefore, for all students, half or full day field trips to areas of geological interest are a normal adjunct to several courses. For students in the Major Programme, geological and geophysical field schools are conducted by staff members in the two weeks following the completion of examinations in the spring. Students following the General Programme are not required to take these field schools, but if suitably qualified, may be granted permission to do so by the Department.

SUMMER EMPLOYMENT

It is strongly recommended that prior to graduation at least one summer be spent in some phase of geological work. Although the Department of Geotechnical Science cannot guarantee summer employment, its students can normally expect to be engaged in suitable work, during the summer months, with government agencies or private companies.

201
(201)* **Introduction to Geologic Mapping. Half Course.** Staff
(Not given 1970-71)

Students are introduced to the use of transits, levels, compass, air photos, etc. Some elementary concepts of map making and descriptive geometry are studied, and simple outcrop maps are constructed from notes obtained in the field.

Two week field school in May.

202 General Geology. Half Course.

No longer offered. See CEGEP courses Geotech. 101 and 102 for equivalent.

203
(203) Descriptive and Determinate Mineralogy. Half Course. J. T. Jenkins
(Not given 1970-71)

The lecture portion of the course is concerned with the classification and description of minerals in terms of their physical and chemical properties, compositions, geological environments, geographical occurrences, and uses. In the laboratory, simple physical and chemical tests are outlined, and then applied in identifying some 150 minerals.

Lectures: 1 hour per week for two terms.

Laboratory: 2 hours per week for two terms.

Text: Kraus, Hunt, and Ramsdell, *Mineralogy*. McGraw-Hill.

205
(205) Morphological Crystallography. Half Course. J. T. Jenkins
(Not given 1970-71)

This course is an introduction to crystallography, in which a systematic but brief description of the morphology of the forms of some of the mineralogically important crystal classes is given.

Lectures: 2 hours per week for 1 term.

Laboratory: 3 hours per week for 1 term.

Text: Kraus, Hunt, and Ramsdell, *Mineralogy*. McGraw-Hill.

*Bracketed number is old designation.

206 **Applied Geophysics. Half Course.** K. K. Mukherji
(303) (May be offered 1970-71. First Term.)

An introduction to geophysical methods of prospecting and of investigating sub-surface structures. The theories, uses and limitations of various magnetic, electrical, gravitational and seismic methods are explained and compared. The practical operation of the instruments is reviewed and actual field results are obtained and analysed.

Lectures: 2 hours per week for one term.

Laboratory: 3 hours per week for one term.

Text: Dobrin, *Introduction to Geophysical Prospecting.* McGraw-Hill.

207 **Field Geophysics. Half Course.** K. K. Mukherji
(304) (May be offered 1970-71)

Field work involving small scale seismic, magnetic, gravimetric and electrical surveys.

Prerequisite: Geotechnical Science 206.

Field Work: 2 weeks in May at the Loyola Geophysics Field School.

208 **Invertebrate Paleontology. Half Course.** K. K. Mukherji
(310)

A systematic survey of invertebrate fossil forms with emphasis on stratigraphic occurrence, morphology and classification. Study of principles of evolutionary concepts, use of fossils in zonation and environmental influence.

Lectures: 2 hours per week for first term.

Laboratory: 3 hours per week for first term.

Text: Moore, Lalicker, and Fisher, *Invertebrate Fossils.* McGraw-Hill.

209 **Optical Crystallography. Half Course.** J. T. Jenkins
(404) (Not given 1970-71)

Lectures deal with the theoretical background necessary for the use of the petrographic microscrope. In the laboratory, oil immersion techniques for the determination of isotropic and anisotropic minerals in powder form are studied. If time permits, an introduction to the use of the four-axis Universal Stage is given.

Prerequisite: Geotechnical Science 205.

Lectures: 2 hours per week for one term.

Laboratory: 3 hours per week for one term.

Texts: Wahlstrom, *Optical Crystallography,* 3rd. ed., Wiley. U.S.G.S. Bull. 848, *The Microscopic Determination of the Nonopaque Minerals.* 2nd. ed.

301 **Structural Geology. Full Course.** E. H. Chown
(305)

Examination of geological structures and their origin. Methods of structural interpretation. Laboratory survey of graphical methods and exercises illustrating the analysis of practical problems.

Lectures: 2 hours per week for two terms.

Laboratory: 3 hours per week for two terms.

Text: Hills, *Elements of Structural Geology,* Methune OR *Introduction to the study of the Earth,* McGraw-Hill.

302 **Elementary Petrology. Half Course.**
(306) J. T. Jenkins and K. K. Mukherji

A laboratory course in the identification of hand specimens of sedimentary, igneous and metamorphic rocks.

Lectures: 1 hour per week for 2 terms.

Laboratory: 2 hours per week for 2 terms.

303 **Geomorphology. Half Course.** J. P. Mills
(401)

An advanced course in the study of landforms produced by the process of erosion and deposition by water, wind, glaciation and earth movements. The interrelationship of geologic processes, materials and structures, soil types, climatic conditions, etc., in the development of topographic forms is emphasized. Suites of maps and air photos plus one full day field trip are used to illustrate the lectures.

Lectures: 2 hours per week for first term.

Lab.: 2 hours per week for first term.

Text: To be announced.

304 **Field Geology. Half Course.** J. T. Jenkins and K. K. Mukherji
(403)

Surface and underground field mapping methods. Preparation of geological maps, sections and reports from field notes, diagrams, air photos, etc.

Prerequisite: Geotechnical Science 301, 302.

Field Work: 2 weeks in May at the Loyola Geophysics Field School.

305 **Sedimentary Petrology. Half Course.** E. H. Chown
(409)

The formation, occurrence and classification of sedimentary rocks. Laboratory includes a brief survey of techniques applied to unconsolidated sediments, but particular emphasis is placed on the microscopic examination of sedimentary rocks.

Prerequisite: Geotechnical Science 205, 209.

Lectures: 2 hours per week for second term.

Laboratory: 3 hours per week for second term.

Text: Pettijohn, *Sedimentary Rocks* - 2nd ed. Harper.

306 **Geochemistry. Half Course.** D. J. McDougall
(410a)

Geochemistry of the earth as a whole, the lithosphere, hydrosphere and atmosphere. The application of geochemistry to the search for ore deposits. In the laboratory, the material discussed in the lectures is illustrated by using a variety of methods including geochemical calculations and trace element studies.

Lectures: 2 hours per week for first term.

Laboratory: 3 hours per week for first term.

Text: Brian Mason, *Principles of Geochemistry,* 3rd ed., Wiley.; and selected references.

401 Historical Geology. Half Course.   K. K. Mukherji
(204) (Not given 1970-71)

Principles of stratigraphy; correlation and time concepts; geologic history of North America with emphasis on type sections; paleogeography tectonics; and organic evolution.

Lectures: 2 hours per week for first term.

Laboratory: 3 hours per week for first term.

Text: Dunbar & Waage *Historical Geology*, Wiley.

402 Engineering Geology. Half Course.
(402) (May be offered 1970-71)

Engineering properties of rocks. Ground water. The formation and mechanics of soils including structure, gradation, sedimentation, permeability, compressibility and shearing strength. Application of soil characteristics to typical geotechnical problems in bearing capacity, settlement and lateral earth pressure. Crustal movements and stability of slopes. Frost action in regolith. Laboratory work for experimental determination of above characteristics.

Lectures: 2 hours per week for one term.

Lab.: 3 hours per week for one term.

403 Geology of Canada. Half Course.   K. K. Mukherji
(405)

Description of the geology of the major geomorphic subdivisions of Canada and the evaluation of the mineral resources of each. Reading assignments and colloquium are used to probe into specific problems.

Lectures: 2 hours per week for second term.

Colloquium: 1-3 hours per week for second term.

Text: *Geology and Economic Minerals of Canada*, 4th ed. Econ. Geol. Series no. 1 of the Geological Survey of Canada.

404 Igneous and Metamorphic Petrology. Full Course.   J. T. Jenkins
(406)

The first part of the course deals with the chemistry, mineralogy, fabrics, classifications, and petrogenesis of the igneous rocks. This is followed by an examination of the scope of metamorphism and the relationships amongst metamorphism, magma, and orogeny. In the laboratory, a large number of igneous and metamorphic rocks are examined and described, employing megascopic and microscopic techniques.

Prerequisites: Geotechnical Science 203, 205, 209

Lectures: 2 hours per week for two terms.

Lab.: 3 hours per week for two terms.

Texts: Huang, *Petrology*, McGraw-Hill. Moorhouse, *The Study of Rocks in Thin Section*, Harper. Deer, Howie & Zussman, *An Introduction to the Rock Forming Minerals*, Longmans, Canada.

405 Economic Mineral Deposits. Full Course.
(407)   E. H. Chown, D. J. McDougall, K. K. Mukherji

The origins, types of occurrence and classification of metallic and non-metallic mineral deposits of economic importance.

Prerequisite: Geotechnical Science 301, 404.

Lectures: 2 hours per week for two terms.

Lab.: 3 hours per week for two terms.

Text: Park and MacDiarmid, *Ore Deposits*, Freeman.

406 Mineral Physics. Half Course.   D. J. McDougall
(410b)

Selected aspects of the formation and properties of minerals in relation to their solid state characteristics. Comparisons with the solid state characteristics of metals and artificial compounds.

Lectures: 2 hours per week for second term.

Laboratory: 3 hours per week for second term.

408 Geotechnical Laboratory. Full Course.   Staff
(408)

Major students in their final year are expected to show competence in isolating and examining a geological problem, using techniques available within the department, working in conjunction with an assigned faculty adviser. Course evaluation will be based on the student's performance in the investigation and on a short written report.

HISTORY

Associate Professor
(Chairman)   F. G. W. Adams
Associate Professors   D. C. Savage (on leave), R. T. Coolidge (on leave)
Assistant Professors   W. E. Akin, W. H. Hubbard, C. Schlacks, Jr., R. Tittler
Lecturers   R. J. Morgan, M. Vipond, E. Wedemeyer
Sessional Lecturer   Rev. J. Monet, S.J.

Courses leading to an Honours B.A. in History

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	HISTORY (Three Electives from General Courses) Philosophy Theology	HONOURS HISTORY TUTORIAL HISTORY (Two Electives from Honours Courses) Philosophy One Elective	HONOURS HISTORY TUTORIAL HISTORY (Two Electives from Honours Courses) Theology One Elective

Of the four honours history courses in the third and fourth year, one may be in the same field as the tutorial course, two must be in other fields, and one may be in another department at the discretion of the student's tutorial advisor. Students in the honours history programme will be assigned a faculty advisor, who will normally be the director of their honours history tutorial and with whom they must consult concerning their selection of courses.

Students are required to take two theology courses. If this requirement is completed in the first and second years, students may substitute a second elective in fourth year.

There is a comprehensive oral examination for all honours history students towards the end of their final year.

Courses leading to a B.A. with a Major in History

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Classics 112 or 202 or 212 or 221 French HISTORY (Two Electives from General Courses) Philosophy Theology	English HISTORY (Two Electives from General or Honours Courses) Philosophy One Elective	HISTORY (Two Electives from General or Honours Courses) Theology Two Electives

*Not offered 1970-71.

SURVEY COURSES

201 History of Canada. Full Course.
M. Vipond
R. Morgan

Survey of Canadian History. The course is arranged topically and the student is expected to read intensively in certain areas. The term work requirements are three book reviews, seven to ten pages each. The course will centre on the historiography of French Canadian history, the ideological development of English Canada in the 19th century, analysis of economic growth in Canada, the impact of the First World War and the period of post-war unrest and will conclude with an examination of problems in post 1945 Canadian society.

202 History of the United States. Full Course.
W. Akin

Survey of American history from settlement to the mid-twentieth century. The focus of the course is political, but considerable attention is devoted to social and intellectual movements. Students might read in advance Richard Hofstadter, *et al.*, *The Structure of American History*.

Lectures and seminars: 3 hours a week for two terms.

203 History of Modern Europe, 1760-1919. Full Course.
W. Hubbard

Social, economic and political development of Europe from the ancien régime to the crisis of 1914-18. Emphasis is on changing patterns of social structure and evolution of political ideologies in response to the growth of modern industrial society. Two book-review essays required.

204 The World Since 1914. Full Course.
(Not offered 1970-71)

205 History of Medieval Europe. Full Course.
(Not offered 1970-71)

206 Renaissance and Reformation. Full Course.
(Not offered 1970-71)

207 History of England, 1485 to the present.
R. Tittler

Emphasis on the development of English society and political structure, with some attention to religious, cultural, and economic development as well.

Lectures: 3 hours per week for two terms.

208 Imperial Russian History from Peter the Great to Lenin, (1689-1917).
C. Schlacks

Text: Nicholas V. Riasanovsky, *A History of Russia*, 2nd ed. New York: Oxford University Press, 1969.
Readings: (on reserve in the Library):
Basil Dmytryshyn, ed. and trans., *Imperial Russia, a Source Book: 1700-1917;* Sidney Harcave, ed., *Readings in Russian History*, 2 vols.; Thomas Riha, ed., *Readings in Russian Civilization*, rev. ed., Vols. II, III; Alfred Erich Senn, ed., *Readings in Russian Political and Diplomatic History*, 2 vols.

Lectures: 3 hours per week for two terms.

209 Introduction to the History of Africa. Full Course.

Africa before the Europeans, Islamic and European Conquests, slavery, resistance movements and the rise of nationalism.

Texts: R. Rotberg, *Political History of Tropical Africa*; R. Oliver & A. Atmore, *Africa Since 1800*.

214 History of Modern Germany (1740-1945). Full Course.

(Not offered 1970-71)

216 History of Ancient Greece and Rome. Full Course.   D. Brown

Listed as Classics 330 and may be taken either as a history or a classics course.

Lectures: 3 hours per week for two terms.

217 History of China.

221 French Canada from the origins to the present. Full Course.

J. Monet, S.J.

227 History of the Middle East. Full Course.   H. Habib

Listed as Political Science 755 and may be taken as either a history or political science course.

Lectures: 3 hours per week for two terms.

228 Power and Protest in the Middle Ages.   E. Wedemeyer

A thematic approach to the history of Western Europe between the eleventh and fifteenth centuries. An investigation of the "established order" — in government, in religion, in art and literature, in commerce, — of the ways in which this order was challenged, and of the changes effected by the dialogue between order and dissent.

Lectures and seminars: 3 hours per week.

HONOURS COURSES

303 Church and State in the Middle Ages.

(Not offered 1970-71)

304 Nationalism in Africa.

A study of African resistance to European rule in terms of culture and politics.

306 Problems in Nineteenth-Century Russian Intellectual History.   C. Schlacks

Discussions and regular brief reports in order to provide a foundation for a research paper which will be read in class, discussed, revised and then submitted in final form at the end of the academic year.

Seminar: two hours per week for two terms.

307 Revolutions in the Modern World — France and China.

G. Adams, R. Porter

308 Man in Contemporary Society.   Staff

A reading and discussion course on the key intellectual, social and political trends of the 20th century. Emphasis is placed on an interdisciplinary approach to such topics as political elites, nationalism in the Third World, etc. Further information may be obtained from the Department Chairman.

Seminar: 2 hours per week for two terms.

309 Philosophy of History.

310 The Age of the Enlightenment (1660-1789).

(Not offered 1970-71)

311 Tudor-Stuart England.

(Not offered 1970-71)

312 American Intellectual History.

(Not offered 1970-71)

313 The Russian Revolutions of 1905 and 1917.   C. Schlacks

Discussions and regular brief reports in order to provide a foundation for a research paper which will be read in class, discussed, revised and then submitted in final form at the end of the academic year.

Seminar: two hours per week for two terms.

315 Problems in Central European History Since 1815.

(Not offered 1970-71)

317 World War I: War and Revolution in European Society.

W. Hubbard

318 Problems in American History.   W. Akin

An intensive study of selected themes in modern American history. Emphasis upon historiography, social and intellectual history.

Seminar: 2 hours per week for two terms.

319 Education in the Middle Ages.

(Not offered in 1970-71)

326a Social Change: The Native Peoples of Canada. Full Course.
Faculty

Examines the crisis of the native peoples of Canada from a multi-discipline perspective; participants shall include not only the Loyola community but Indian and White experts from throughout Canada, as well as a strong contingent of Indians from Québec. The course attempts to set forth the magnitude of this crisis and ends by asking how the Native Peoples will be able to control their own lives and future.
See Interdisciplinary Studies 400A.

326b Social Change: Technology and Social Change. Full Course.
Faculty

An interdisciplinary study of the relationship of technology to social organization, political philosophy, education, morality and the arts. The philosophical assumptions of the technical era, the structural development of the prevailing Western world view, and alternative world views will be examined. A central theme of the course will be the understanding of the current ecological crisis and possible solutions.
See Interdisciplinary Studies 400B.

327 Medieval Society.
E. Wedemeyer

A problematical approach, based largely upon student interests, with the purpose of analysing social groupings in the Middle Ages.

328 Marx, Freud and History.
(Not offered in 1970-71)

329 Introduction to Archaeology. Full Course.
D. Brown

Listed as Classics 340 and may be taken either as a history or classics course.

330 The Origins of Rome. Full Course.
D. Brown

The early history of the city that was to rule the world. Pre-historic Italy: Palafitte, Terremare, and Villanova. The Etruscans and the coming of the Greeks. The Italic Peoples. The evidence from Archaeology. The Story of Romulus and Remus. The seven kings. The record of Livy. Modern theories and interpretations.

331 The Evolution of Nationalism in English-speaking Canada.
M. Vipond

332 Quebec and the Maritimes: A comparative study of regionalism.
R. Morgan

333 Religious Dissent and Social Protest in the English Tradition, 1500-1832.
R. Tittler

Examination of the Dissenting Religious groups in the English tradition, including the Lollards, Puritans, Presbyterians, Baptists, Quakers, Methodists, etc., and their impact on society and social protest movements. Readings, Research papers, and group discussions.
Seminar: two hours a week for two terms.

400 Honours History Tutorial.

The history tutorial programme is open to honours students in history only. All honours students in history must select an area of concentration from the list below at the end of second year. At the end of third year they must choose, in consultation with their tutorial directors, a research topic or other specialized work for intensive analysis during the fourth year. The history department will also accommodate those honours history students who desire to pursue an interdisciplinary or thematic interest in their third and fourth year. The tutorial course will be the equivalent of two full courses, and examinations will be given at the end of the third and fourth years. The tutorial directors may, at their discretion, assign summer reading as part of the course work.
1. North American History
2. British History
3. European History 400-1600
4. European History 1600 to the present
5. Africa and Asia
6. Ancient History

DEPARTMENT OF INTERDISCIPLINARY STUDIES

The Department of Interdisciplinary Studies offers a self-directed Major to students who do not wish to limit themselves to the usual disciplines. Further information may be obtained from the Dean of Arts.

400 Social Change. Full Course.   Staff

An interdisciplinary approach to problems of social change with emphasis on the contemporary world. The various faculty members will be drawn from diverse fields and disciplines.

Lectures and Seminars: 2 hours per week for two terms.

Text and topics to be announced.

MATHEMATICS
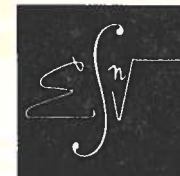
Associate Professor and Chairman	A. J. Prillo
Professor	Rev. E. O'Connor, S.J.
Associate Professor	T. N. Srivastava
Assistant Professors	M. Faierman, K. N. Majumdar, R. C. Moore (Academic Secretary), J. Soric, H. Kim
Lecturers	A. Keviczky, R. Smith

Courses leading to an Honours B.Sc. in Mathematics

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	MATHEMATICS 220 MATHEMATICS 231 MATHEMATICS 201 or 240 MATHEMATICS 234 Philosophy Physics 205	MATHEMATICS 320 MATHEMATICS 321 MATHEMATICS 330 Philosophy Physics 311 Theology	English MATHEMATICS 460 MATHEMATICS 430 MATHEMATICS 490 One or two from: MATHEMATICS 401 MATHEMATICS 440 MATHEMATICS 421 MATHEMATICS 470, 471 MATHEMATICS 480 Philosophy or Theology

Courses leading to a B.Sc. with a Major in Mathematics

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	MATHEMATICS 221 MATHEMATICS 232 One from: MATHEMATICS 201 MATHEMATICS 240 Philosophy Physics 205 Theology	MATHEMATICS 234 MATHEMATICS 331 MATHEMATICS 320 Philosophy Physics 311	English MATHEMATICS 321 MATHEMATICS 330 MATHEMATICS 490 One from: MATHEMATICS 401 MATHEMATICS 440 MATHEMATICS 460 MATHEMATICS 470, 471 MATHEMATICS 480 Philosophy or Theology

Courses leading to a General B.Sc. in Mathematics

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	MATHEMATICS 221 MATHEMATICS 232 Philosophy Theology One Elective	English MATHEMATICS 201 MATHEMATICS 234 MATHEMATICS 240 Philosophy	MATHEMATICS 320 MATHEMATICS 331 Philosophy or Theology One Elective

*Not offered 1970-71.

NOTE: Those students who wish to proceed to an Honours B.A. in Mathematics or a B.A. with a Major in Mathematics should consult the chairman of the Department.

201 Probability and Statistics. Full Course. R. C. Moore

Frequency Distributions, probability, Binomial, Normal and Poisson Laws. Sampling Theory, Curve Fitting. Distribution of Chi-Squares, F and T. Hypothesis Testing. Quality control. Regression Theory. Analysis of Variance. Introduction to Experimental Design.

Lectures: 3 hours per week for two terms.

Text: To be announced.

202 Elementary Statistics. Half Course. R. C. Moore and Staff

Empirical frequency. Distributions and Descriptive Measures; Elementary Probability; Populations, samples and Theoretical Distributions; Sampling Distributions; Estimation of Confidence Intervals; Tests of Hypotheses; two sample techniques; tests for goodness of fit; Regression and Correlation; Analysis of Variance.

Lectures: 3 hours per week for one term (for Non-Math. students).

Text: *Elementary Statistics*. P. G. Hoel (Wiley).

205 Calculus. Full Course. A. J. Prillo

A first course aiming to cover as completely as possible the ordinary techniques and applications of calculus.

Limits of functions, differentiation and integration of polynomials with applications; second derivative and differentiation of algebraic, exponential and logarithmic functions; curvature; definite integral. Differentiation and integration of trigonometric functions; methods of integration; improper integrals; applications of the definite integrals; approximate integrals; partial derivatives, multiple integrals; expansion of functions.

Lectures: 3 hours per week for two terms.

Text: To be announced.

210 Analytic Geometry and Calculus. Full Course. M. Faierman

A continuation of Math. 110.

Methods of integration. Indeterminate forms and improper integrals. Two and three dimensional vector geometry. Polar, cylindrical and spherical coordinates. Functions of more than one variable. Partial differentiation. Multiple integrals. Introduction to elementary differential equations.

Lectures: 3 hours per week for two terms (Engineering).

Text: *Analytic Geometry and the Calculus* by Goodman (Macmillan).

212 Algebra. Full Course.

Inequalities, complex numbers, theory of equations. Determinants and matrices; convergence and divergence of series, Taylor and MacLaurin series.

Lectures: 2 hours per week for two terms. (Engineering)

Text: To be announced.

220 Algebra. Full Course. Rev. E. O'Connor, S.J.

The first part of this course aims at an accurate working familiarity with the following topics: real numbers; decimal approximations; abbreviated methods of computations; inequalities; complex numbers; formal and functional properties of polynomials; polynomial equations; rational functions.

The second part embraces the following topics: solution of cubic and quartic equations by radicals; systems of linear equations; determinants; matrices; linear transformations (projecture and complex); symmetric functions of the roots of an equation; approximation of irrational numbers by rationals; impossibility of angle trisection by ruler and compass; sequences; limits; summation of series.

Lectures: 3 hours per week for two terms. (Honours Math. only)

Reference: Courant and Robbins, *What is Mathematics?* (Oxford)

221 Introduction to Modern Mathematics. Full Course.

The integers; the rational and real number systems; infinite sequences and series; the Cauchy convergence criteria; inequalities, introduction to complex numbers; some elementary functions of complex variable; exponential, sine and cosine functions, Euler identity, extraction of roots, logarithmic function; polynomials and polynomial equations and their graphs; fundamental theorem of algebra; roots of polynomial equations; determinants and their applications; matrices; multiplication of matrices, inverse of a matrix, matrix solution of system of equations; vector analysis.

Lectures: 3 hours per week for two terms.

Text: *Algebra & Vector Geometry* by R. G. Stanton & K. D. Fryer (Holt, Rinehart & Winston, 1965).

231 Advanced Calculus. Full Course. T. Srivastava

Methods of integration, indeterminate forms and improper integrals. Infinite Series. Taylor's and McLaurin's Series. Functions of more than one Variable. Continuity. Partial Differentiation. Multiple Integrals. Line and Surface Integrals. Introduction to Complex Variables.

Lectures: 3 hours per week for two terms.

Text: *Advanced Calculus* by Sokolnikoff (McGraw-Hill).

232 Analytical Geometry and Calculus. Full Course. M. Faierman

A continuation of Math. 131.

Methods of Integration. Indeterminate forms and Improper Integrals. 2 and 3-dimensional Vector Geometry. Polar Coordinates. Infinite series. Functions of more than one variable. Partial Differentiation. Multiple Integrals.

Lectures: 3 hours per week for two terms.

Text: *Analytic Geometry and the Calculus* by Goodman (Macmillan).

234 Differential Equations. Full Course.   M. Faierman and Staff

Equations of first order. Equations of first order and degree higher than the first. Singular solutions. Linear equations with constant coefficients. Variation of parameters. System of linear equations. Solution by Laplace transform. Simple equations with variable coefficients. Fourier series; series solution. Boundary value problems. Sturm Liouville problems. Existence and uniqueness theorems. Lagrange's partial differential equation. Linear partial differential equation with constant coefficients. Separation of variables. Applications.

Lectures: 3 hours per week for two terms.

Text: *Differential Equations* by Ross (Blaisdell).

240 Numerical Methods. Full Course.   R. Smith

A first course in numerical methods with aid of IBM 1620. Elementary Finite Differences. Solution of equations. Computation with series and integrals. Linear systems and matric methods. Difference equations and relaxation methods. Numerical solutions of differential equations. Principles of automatic computation; methods of Computer programming.

Lectures: 3 hours per week for two terms.

Text: To be announced.

312 Differential Equations. Full Course.   R. Smith

First-order ordinary differential equations. Linear equations with constant coefficients. Laplace transforms. Solutions in series. Systems of linear equations. Boundary value problems. Numerical methods. Introduction to partial differential equations. Introduction to integral equations.

Lectures: 2 hours per week for two terms. (Engineering)

Text: *Differential Equations with Applications* by Ritgers & Rose (McGraw-Hill, 1968).

313 Engineering Mathematics. Full Course.   T. Srivastava

Vector Analysis. Introduction to partial differential equations. Legendre functions. Bessel functions. Fourier series. Complex Analysis up to conformal mapping.

Lectures: 2 hours per week for two terms.

Text: *Advanced Engineering Mathematics* by Kreyszig (Wiley).

320 Linear Algebra. Full Course.   J. Soric

The following topics are covered: linear equations, vector spaces, linear transformations, polynomials, determinants, invariant direct-sum decompositions, the rational and Jordan forms, inner product spaces, bilinear forms.

Lectures: 3 hours per week for two terms.

Text: To be announced.

321 Modern Algebra. Full Course.   K. N. Majumdar

This course is an introduction to modern abstract algebra. It includes group theory, rings and their properties, division rings, quaternions, fields, mappings of algebraic systems, rudiments of Galois theory of equations and Galois fields.

Lectures: 3 hours per week for two terms.

References: *A survey of Modern Algebra* by Birkhoff and Maclane; *Topics in Algebra* by I. N. Herstein; *Introduction to Modern Abstract Algebra* by D. N. Burton (Addison Wesley).

330 Real Analysis. Full Course.   K. N. Majumdar

This course is an introduction to rigorous mathematical analysis. It thoroughly covers elementary set theory, theory of sequences, series, tests of convergence, inequalities, real variable theory and Riemann's integration theory.

Lectures: 3 hours per week for two terms.

References: *Theory and application of infinite series* by K. Knopp (Dover): *Mathematical Analysis* by Tom M. Apostol; *Mathematical Analysis* by T. M. Flett (McGraw-Hill); *Methods of Real Analysis* by R. R. Goldberg (Blaisdell).

331 Advanced Calculus. Full Course.

Limits, continuity, differentiability of functions of several variables; implicit and inverse function theorems: multiple and line integrals; integrals as functions of parameters; improper integrals; complex analysis.

Lectures: 3 hours per week for two terms.

Text: To be announced.

332 Advanced Calculus. Full Course.   T. Srivastava

Limits and continuity of a function of two variables; partial differentiation; multiple and line integrals; infinite series; improper integrals. Differential equations.

Lectures: 2 hours per week for two terms. (Chemistry)

Text: To be announced.

401 Mathematical Statistics. Full Course.   R. C. Moore

Probability. Discrete and continuous random variables. Distribution functions. Probability generating functions. Characteristic functions. Normal chi-square and F-distributions. Sampling distributions. Confidence intervals, tests of hypotheses. Sufficient statistics, maximum likelihood estimation. Correlation, regression.

Lectures: 3 hours per week for 2 terms.

Text: *Statistical Theory* — Lindgren (Macmillan).

421 Special Topics in Algebra. Full Course.   H. Kim

This is a continuation of Mathematics 321.

It includes Rings and Modules, Structure of Groups, Lattices, Categories and adjoint functors, and Multilinear Algebra.

Lectures: 3 hours per week for two terms.

Text: *Algebra* by MacLane & Birkhoff (Macmillan, 1967).

430 Real and Complex Analysis. Full Course. Rev. E. O'Connor, S.J.

A continuation of Mathematics 330. Functions of a Real Variable; Functions of a Complex Variable.

Lectures: 3 hours per week for two terms.

Texts: *The theory of Functions* by Titchmarsh (Oxford).
Theory of Functions: Part II by K. Knopp (Dover).

440 Numerical Analysis. Full Course. R. Smith

Polynomial approximation, interpolation. Numerical differentiation, quadrature, and summation. Numerical solution of ordinary differential equations. Functional approximations, least squares techniques, minimum maximum error techniques. Solution of nonlinear equations. Solution of simultaneous linear equations. Calculation of eigenvalues and eigenvectors of matrices.

Lectures: 3 hours per week for two terms.

Text: *A First course in Numerical Analysis* by A. Ralston (McGraw-Hill, 1965).

460 Introduction to Topology. Full Course. J. Soric

This is an introductory course in point-set topology, with a considerable stress on metric spaces. The standard topics are covered: sets and functions, metric spaces, topological spaces, compactness, separation axioms, connectedness, approximation.

Lectures: 3 hours per week for two terms.

Prerequisite: Math. 330 or Permission of Instructor.

Text: *Introduction to Topology and Modern Analysis* by Simmons (McGraw-Hill).

470 Tensor Analysis. Half Course. T. Srivastava

Transformation Laws of Contravariant, covariant and relative tensors; connections, covariant and intrinsic derivatives. Curvature tensors. Parallel displacement. Bianchi and Veblen identity. Riemannian metric, christoffel symbols. Curvature tensors with respect to christoffel symbols. Differential operators, geodesics, geodesic coordinates. Riemannian curvature.

Lecture: 3 hours per week, first term.

Text: To be announced.

471 Differential Geometry. Half Course. T. Srivastava

Conformal geometry. Orthogonal basis. Curl of congruence. Canonical congruences. Gaussian and Riccian curvature. Existence of normals. Gauss formula. Tensor derivative of the normal vector, lines of curvature. Generalized Mainardi-Codazzi and Gauss equations. Flat space. Subspaces of a flat space.

Lectures: 3 hours per week, second term.

Text: To be announced.

480 Number Theory. Full Course. K. N. Majumdar

This course covers the standard classical results of Fermat, Euler, Gauss and others relating to arithmetical functions, theory of congruences, detailed study of quadratic congruences, some additive number theory, Bertrand "postulate," elementary distribution theory of primes.

Lectures: 3 hours per week for two terms.

References: *An introduction to the Theory of Numbers* by Hardy & Wright (Oxford).
Topics in Number Theory, Vol. I and II by Le Veque.

490 History of Mathematics. Half Course. E. O'Connor, S.J.

The development of Mathematics from ancient to modern times, including study of prominent mathematicians and their works. Problems will be worked using both modern and historical approaches.

Lectures: 1 hour per week for two terms.

Text: *An introduction to the History of Mathematics* by H. Eves (Rev. Edition) (Holt, Rinehart & Winston).

MODERN LANGUAGES

Professor (Chairman)   C. Fonda
Associate Professor   F. Antolín
Assistant Professors   A. Costanzo; C. Di Michele; H. Famira
                              E. Ottolenghi; H. Scheer
Lecturer   M. Trsic

Courses leading to a B.A. with a Major in One Modern Language

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Classics	Philosophy	Language
	English	Language	Language
	French	Language	Language
	Philosophy	Theology	Theology
	Spanish	Elective	Elective
	Elective		

Courses leading to a B.A. with a Double Major in Modern Languages:

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Classics	Language 1	Language 1
	English	Language 2	Language 1
	French	Language 2	Language 2
	Maj. Subj. 1	Philosophy	Language 2
	Philosophy	Theology	Theology
	Maj. Subj. 2		

*Not offered 1970-71.

In addition to the above programmes, students may also obtain a B.A. with a double major in a Modern Language and another discipline, such as Economics, French, etc. Students wishing to enroll in such a programme should consult the Chairman of the Department of Modern Languages and the Chairman of the other field of specialization.

Note 1. In the course of their four year programme, students must take two courses in each of the following:

> Classics
> English
> French
> Philosophy
> Theology

Note 2. In order to fulfill the departmental requirements, students must take 7 courses for a Major and 10 (5 in each language) for a Double Major in the language(s) of their specialization.

GERMAN LANGUAGE AND LITERATURE

090 Scientific German   H. Famira, H. Scheer & Staff

German for reading purposes only. Designed to enable the student to read German texts, especially Philosophy, Theology and Science.
Lectures: 3 hours per week for 2 terms

100 Elementary German   H. Famira, H. Scheer & Staff

An introductory course for students with little or no knowledge of German.
Lectures: 3 hours per week for 2 terms
Lab.: 1 hour per week for 2 terms

200 Intermediate German   H. Famira, H. Scheer & Staff

Practice in grammar and conversation; composition; readings from modern German authors.
Lectures: 3 hours per week for 2 terms
Lab.: 1 hour per week for 2 terms

299 Intensive Elementary German   H. Famira, H. Scheer & Staff
(Not offered in 1970-71)

An intensive course which offers German 100 and German 200 in one year. For those students who want to advance quickly.

310 Survey of German Literature 800 — 1750
(Not offered in 1970-71)

A chronological consideration of the main currents of German literature from its beginning to 1750.

320 Introduction to the German Theatre
(Not offered in 1970-71)

Development of German dramatic literature from the Barocque to Brecht.

330 Introduction to the German "Novelle"   H. Scheer

The "Novelle" as an example of highly sophisticated formal achievement in German literature.
Lectures: 3 hours per week for 2 terms

370 Stylistics and Advanced Conversation   Staff

Introduction to comparative stylistics. Vocabulary expansion by word formation and derivation, by synonymy and idiomatic structures. Selected grammar problems. Analysis of texts.
Lectures: 3 hours per week for 2 terms

400 Literature of the 18th Century
(Not offered in 1970-71)

The preclassic and classic period of German literature with its philosophical background.

420 German Literature of the 20th Century
(Not offered in 1970-71)

A review of the most important writers of the period. Selected readings, composition and conversation.

470 Theatre Workshop
Staff

Examination of the principal works of two or three major dramatists. Performance of two plays: one in the first and one in the second semester. Introduction to the theory and practice of stage production. Phonetics and diction. Permission of the Department is required for enrolment in this course.
Lectures: 3 hours per week for two terms plus practical work

530 Literature of the Romantic Period
H. Famira

Romanticism as a universal attitude. Writtings of the major Romantic authors, their theories and realizations.
Lectures: 3 hours per week for 2 terms

540 Novel of the 19th Century
(Not offered in 1970-71)

The development between Goethe and the Expressionism.

ITALIAN LANGUAGE AND LITERATURE

100 Elementary Italian
A. Costanzo, C. Di Michele & Staff

A basic introduction to the language for students with little or no knowledge of Italian. This course is designed to develop understanding, speaking, reading and writing of Italian.
Lectures: 3 hours per week for 2 terms
Lab.: 1 hour per week for 2 terms

200 Intermediate Italian
A. Costanzo, C. Di Michele & Staff

Further practice in speaking, reading and writing, with a systematic review of grammar. Introduction to Italian literature and civilization.
Lectures: 3 hours per week for 2 terms
Lab.: 1 hour per week for 2 terms

300 Italian Civilization
(Not offered in 1970-71)

A survey of Italy's cultural heritage as expressed in selected historical, literary and artistic works.

310 Survey of Italian Literature
(Not offered in 1970-71)

A history of Italian literature from the Middle Ages to the present. Emphasis on the major writers of Italy.

370 Advanced Composition and Stylistics
C. Di Michele

Creative writing. Stylistic theories and analysis of literary styles.
Lectures: 3 hours per week for 2 terms

400 Literature of the 17th & 18th Centuries
C. Fonda

A study of the principal literary trends of the 17th and 18th centuries. Emphasis on Marino, Metastasio, Vico, Parini, Goldoni, Alfieri.
Lectures: 3 hours per week for 2 terms

410 Literature of the 19th Century
(Not offered in 1970-71)

A study of the principal literary trends of the 19th century. Emphasis on Foscolo, Leopardi, Manzoni, Carducci, Pascoli, Verga, D'Annunzio.

420 Italian Literature of the 20th Century
(Not offered in 1970-71)

Evolution of Italian literature since 1900. A study of representative works of poetry, drama and the novel. Emphasis on Pirandello, Ungaretti, Montale, Quasimodo, Silone, Pavese, Moravia.

440 Dante
(Not offered in 1970-71)

A study of Dante's life, background and works. Reading and analysis of the *Divina Commedia*.

470 Theatre Workshop
Staff

Examination of the principal works of two or three major dramatists. Performance of two plays: one in the first and one in the second semester. Introduction to the theory and practice of stage production. Phonetics and diction. Permission of the Department is required for enrolment in this course.
Lectures: 3 hours per week for two terms plus practical work

500 Literature of the Middle Ages
A. Costanzo

Origin and development of Italian literature from the Sicilian School, the *Dolce Stil Novo*, through Petrarch and Boccaccio. Emphasis on the *Canzoniere* and the *Decameron*.
Lectures: 3 hours per week for 2 terms

510 Literature of the 15th Century
(Not offered in 1970-71)

The rise of humanism in Italy. A study of representative works of the 15th century. Emphasis on Pulci, Boiardo, Lorenzo de' Medici, Poliziano, Leonardo da Vinci and Sannazaro.

520 Literature of the 16th Century
(Not offered in 1970-71).

Study of the Renaissance in Italy. Emphasis on Machiavelli, Ariosto, Tassol.

580 Tutorial   Staff

A course designed to meet individual needs of advanced students. Guided readings in Italian literature under the supervision of the Department. Written and oral criticism of the works studied.
Lectures: 3 hours per week for 2 terms

RUSSIAN LANGUAGE AND LITERATURE

100 Elementary Russian   Staff

An elementary course in reading, writing and grammar for students with little or no knowledge of Russian.
Lectures: 3 hours per week for 2 terms
Lab.: 1 hour per week for 2 terms

200 Intermediate Russian   Staff

Review of and practice in Russian grammar, composition, reading and conversation with some material from modern Russian writers.
Lectures: 3 hours per week for 2 terms
Lab.: 1 hour per week for 2 terms

310 Survey of Russian Literature   Staff

A study of the development of Russian literature from the origins to the end of the 19th Century.
Lectures: 3 hours per week for 2 terms

SPANISH LANGUAGE AND LITERATURE

100 Elmentary Spanish   E. Ottolenghi, M. Trsic & Staff

Introduction to the language for students with little or no knowledge of Spanish. Understanding, speaking, reading and writing of Spanish.
Lectures: 3 hours per week for 2 terms
Lab.: 1 hour per week for 2 terms

200 Intermediate Spanish   E. Ottolenghi, M. Trsic & Staff

A study of Spanish language through selected literary texts. Grammar review. Emphasis on conversation and composition. Introduction to Spanish and Spanish-American literature.
Lectures: 3 hours per week for 2 terms
Lab.: 1 hour per week for 2 terms

300 The Civilization in Spain and Spanish America   M. Trsic

Principal characteristics of Spanish and Spanish American civilizations: the people, the arts, the letters and the philosophy.
Lectures: 3 hours per week for 2 terms

310 Survey of Spanish Literature
(Not offered in 1970-71)

The evolution of Spanish literary trends from the Middle Ages to the present as illustrated by representative works.

350 The Literature of Spanish America
(Not offered in 1970-71)

Precolumbian literature. Spanish American literature from the conquest period to the 20th century. Emphasis on Romanticism and Modernism.

370 Advanced Composition and Stylistics   F. Antolín

Textual analysis of selected Spanish literary masterpieces. Creative composition and comparative stylistics.
Lectures: 3 hours per week for 2 terms

410 Spanish Literature of the 18th & 19th Centuries
(Not offered in 1970-71)

Study of the principal authors and works of the Enlightenment. The emergence of Romanticism in Spain as reflected in the most representative poets, dramatists and novelists. The Realistic novel in Spain.

420 Spanish Literature of the 20th Century   F. Antolín

Study of the novel, theatre, essay and poetry. Empahsis on the works of J. R. Jiménez, Lorca. Literary trends since the Spanish Civil War.
Lectures: 3 hours per week for 2 terms

450 Spanish-American Literature of the 20th Century   E. Ottolenghi

A study of the principal trends of Spanish-American literature of the 20th century. Poetry, drama, novel and essay. Emphasis will be placed on the socio-political novels dealing with the Mexican Revolution and Indian problems.

Lectures: 3 hours per week for 2 terms

470 Theatre Workshop   Staff

Examination of the principal works of two or three major dramatists. Performance of two plays: one in the first and one in the second semester. Introduction to the theory and practice of stage production. Phonetics and diction.

Permission of the Department is required for enrolment in this course.

Lectures: 3 hours per week for two terms plus practical work.

500 Literature of the Middle Ages

(Not offered in 1970-71)

Study of Spanish literary works from 1140 until 1500.

510 Literature of the Golden Age

(Not offered in 1970-71)

Poetry, drama and novel of the 16th and 17th centuries. Special emphasis on Don Quijote of Cervantes.

530 Generation of 1898

(Not offered in 1970-71)

A study of the principal writers of this generation: Unamuno, Baroja, Azorin, Maeztu, Machado, Valle-Inclán, etc.

LINGUISTICS

300 Introduction to Linguistics

(Not offered in 1970-71)

The nature of language. The methods of language analysis. Introduction to phonology, morphology and syntax. Principles of foreign language instruction.

310 Historical and Comparative Linguistics   C. Fonda

The major language families of the world, especially the Indo-European languages. The history of the major European languages. Exercises in etymology and semantics.

Lectures: 3 hours per week for two terms.

400 Sociolinguistics   Staff

The interaction of linguistic and social structures. Languages in contact. Indigenous and immigrant languages in North America. Dialectology and lexicography.

Lectures: 3 hours per week for two terms.

PHILOSOPHY

Associate Professor and Chairman	J. P. Doyle
Associate Professors	R. C. Hinners, A. S. Kawczak, J. G. McGraw, V. J. McNamara, J. D. Morgan, M. F. Reidy
Assistant Professors	B. Cavanaugh (on leave 1970-71), E. Egan, E. Joos, H. Lau, D. Park (on leave 1970-71)
Lecturers	G. Crotty, J. Goulet, C. Gray, D. O'Connor, L. O'Hanley, P. O'Neill

The College requirement in Philosophy is normally satisfied by any two courses in Philosophy with the exception of Philosophy 100-199 (Collegial students) and Philosophy 500-599 (limited to Philosophy major and honour students).

Courses leading to an Honours B.A. in Philosophy

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Classics 112 or 202 or 212 or 221 Language PHILOSOPHY 200 HISTORY OF PHILOSOPHY Theology One Elective	HISTORY OF PHILOSOPHY (1) PHILOSOPHY ELECTIVE (2) PHILOSOPHY SEMINAR Theology Free Elective (3)	HISTORY OF PHILOSOPHY (1) PHILOSOPHY ELECTIVE (2) PHILOSOPHY ELECTIVE (2) PHILOSOPHY SEMINAR OR TUTORIAL Free Elective (3)

Courses leading to a B.A. with a major in Philosophy

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Classics 112 or 202 or 212 or 221 English French HISTORY OF PHILOSOPHY PHILOSOPHY 200 Theology	Theology HISTORY OF PHILOSOPHY (1) PHILOSOPHY SEMINAR Free Elective (3) Free Elective (3)	HISTORY OF PHILOSOPHY (1) PHILOSOPHY SEMINAR Free Elective (3) Free Elective (3) Free Elective (3)

Courses leading to a B.A. with a double major in Philosophy and History

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Not offered 1970-71.	Theology HISTORY OF PHILOSOPHY (1) PHILOSOPHY ELECTIVE (2) History Elective (4) History Elective (4)	Theology HISTORY OF PHILOSOPHY (1) PHILOSOPHY ELECTIVE (2) History Elective (4) History Elective (4)

*Not offered 1970-71.

(1) Courses in Ancient, Medieval, Modern or Contemporary Philosophy, preferably taken in this order.

(2) Major students should include one course from Logic, Ethics and Epistemology. Honours students should include one each from Logic, Ethics and Epistemology.

(3) Free electives should include one from History and one from German or other Modern Language.

(4) Taken from History 203, 204, 205 or 206.

The Department is not able to indicate which of the following courses will in fact be offered in 1970-71, and which additions will be made, if any. Subsequent information will be available in September.

211 Historical Questions in Philosophy

A consideration of major problems in Philosophy and types of answers given to them.

Lectures: 3 hours per week for two terms.

Open only to students with no previous philosophy

212 Readings in Modern Philosophy

The purpose of this course is to try to understand the phenomenon of modern philosophy, i.e., to clarify the "what" and "why" of various philosophical problems. The focus will be modern man's understanding of himself and his place in the world as reflected in philosophical writings and chief cultural forms as the city and the scientific establishment. Primary texts will be L. Mumford's *The City in History* and P. Ricoeur's *Fallible Man*.

Lectures: 3 hours per week for two terms.

Open only to students with no previous philosophy

220 Philosophy and Social Reality

An introduction to a philosophical study of man as a social being; stressing the works of contemporary thinkers, e.g., Marcuse, Sartre, Fanon, etc.

Lectures: 3 hours per week for two terms.

Open to all students

221 Education and the Individual

The nature of education — some historical and contemporary statements. Discussion concerning the causes and reasons for coming to a university. The nature of contemporary universities — what is taught and why. The relation between the individual and the institutional setting of higher education. The relation between the university and society. Theoretical and strategic considerations relevant to changing the university.

Reading will include selections from Plato, Newman, Dewey, Hutchins, Kerr, Barzun, Ridgeway and Goodman.

Lectures: 3 hours per week for two terms.

222 Problèmes fondamentaux de la philosophie

Le but du cours est d'aborder l'étude de la philosophie à travers les textes littéraires et philosophiques. La méthode employée est celle des collèges et universités français: *le texte expliqué* traditionnel. Nous essaierons d'approfondir le sens de certains concepts fondamentaux pour que la philosophie puisse devenir *une expérience vécue*.

Ce cours peut être d'une très grande utilité à ceux qui désirent poursuivre leurs études dans une matière où la connaissance d'une seconde langue est requise. — Toutefois, la philosophie étant le but ultime de ce cours, tous les travaux écrits peuvent être présentés dans les deux langues, anglais ou français, selon le choix du candidat.

Trois heures par semaine.

Open only to students with no previous philosophy

222-E Fundamental Problems of Philosophy

The aim of the course is to explain and deepen the meaning of certain philosophical concepts through the study of selected authors from ancient and modern philosophy. The course intends to be an introduction to metaphysics, epistemology and ethics.

Lectures: 3 hours per week for two terms.

Open only to students with no previous philosophy

223 Questions in Metaphysics, Epistemology and Ethics

An introduction to some major philosophical concepts and some classic problems which they entail.

Lectures: 3 hours per week for two terms.

Open only to students with no previous philosophy

224 Selected Philosophical Problems

Introduction to selected philosophical problems. A study of classical and contemporary papers. Texts of the Pre-Socratics, the *Republic* of Plato, Descartes' *Discourse on Method*, Bergson's *Introduction to Metaphysics* and important texts of contemporary authors.

Lectures: 3 hours per week for two terms.

Open only to students with no previous philosophy

226 Basic Moral Problems

A consideration of the place of moral thinking within the spectrum of human knowledge and the types of moral knowledge.

Lectures: 3 hours per week for two terms.

Open only to students with no previous philosophy

230 The Nature of Enquiry

An attempt to formulate certain questions which are central to an understanding of contemporary society. This will revolve around two poles; on the one hand attention will be given to society as a whole and the factors influencing its development. On the other hand specific attention will be given to the role of man within this context, and various issues will arise concerning knowledge, human values, art, and metaphysics. Of particular interest will be the very act of questioning itself.

Authors to be studied: R. Descartes, A. Koestler, D. Schen, J. Haligood, A. Camus, M. McLuhan, A. N. Witehead, N. Polanyi, K. Popper.

Lectures: 3 hours per week for two terms.

Open only to students with no previous philosophy

231 Futurontology

A two-semester introduction to philosophy with a special emphasis on metaphysical or ontological "schools" including realism, idealism, pragmatism logical empiricism, existentialism and organicism, stressing relationships to possible metaphysical (ontological) positions of the future (futurontology) and to other fields of philosophy (past, present and future), including epistemology, philosophy of science, philosophy of man, aesthetics, ethics, social philosophy, philosophy of God, and the philosophy of history. The course essentially is a consideration of the possibilities of unifying contemporary and futuristic individual man and mankind in regard to his multidimensional personal and extra-personal existence.

Lectures: 3 hours per week for two terms.

Open to all students

Texts: a. *Living Issues in Philosophy* by Harold H. Titus.
b. *The Futurist:* A monthly periodical published by the World Future Society.

240 Types of Philosophy

A consideration of major problems in Philosophy and types of answers given to them.

Lectures: 3 hours per week for two terms.

Open to all students

301 Tutorial: Problems in Philosophy

Readings to be arranged with the student.

Registration by permission of the professor

310 Ethics: Questions in Moral Evaluation of Human Conduct

A study of the Aristotelean, Situationist and Moral Sense Schools of Ethics and the application of these theories to contemporary problems, especially National Security. Capitalism and Advertising. Sexual Activity and Alienation.

Lectures: 3 hours per week for two terms.

Open to all students

311 Ethics

A consideration of principles underlying moral evaluation, with reference to classical and other positions.

Lectures: 3 hours per week for two terms.

Open to all students

312 Moral Philosophy

The meaning of situation ethics over and against the problem of the moral absolute: the religious and metaphysical implications of ethical options; the relation of joy to moral wholeness and maturation. A criteriology for morals will be sought through an open discussion of concrete problems, with special attention to sex, violence amd money.

Lectures: 3 hours per week for two terms.

Open to all students

Readings include Walter Dirlss, Gabriel Marcel, Jacques Leclerq, Henri Duméry and Paul Ricoeur.

319 Tutorial: Natural Law

Readings in the history of natural law argument, its meaning, and its application to contemporary moral problems.

Prerequisites: 4th year standing and an 80% average in previous Philosophy courses.

Registration by permission of the professor.

320 Social and Political Philosophy

The course treats of the individual in relation to the State and Society through the reading and discussion of selected texts. Problems treated: political authority; classical images of man; personality and society; the paradox of social control.

Lectures: 3 hours per week for two terms.

Open to all students

Text: *Political Man and Social Man*, Ed. Robert Wolff.

321 Advanced Political Philosophy: Communism, Fascism and Democracy

Treats of the theoretical foundations of Communism, Fascism and Democracy through the reading and discussion of selected texts.

Lectures: 3 hours per week for two terms.

Text: *Communism, Fascism and Democracy.* Ed. Carl Cohen.

Prerequisite: one previous Philosophy course.

322 The Genesis of Political Philosophy

Lectures: 3 hours per week for two terms.

Open to all students.

323 Philosophie Politique

Analyse moderne et examen critique des sources classiques et modernes du communisme, du fascisme, et de la démocratie.

Trois heures par semaine.

Condition préalable: un cours de philosophie et la permission du directeur du cours.

330 Ethics and Society

Classical types and perennial problems of social and political philosophy with particular attention to their moral bases and consequences; a general consideration of classical concepts of legal and moral rules, rights and obligations, authority, the state, freedom and justice as exemplified in the writings of Plato, Aristotle, Aquinas, Hobbes, Locke and Mill; a more detailed consideration of the notions of history, ideology, social violence, technology and work as practised in contemporary societies and as conceived in the writings of Marxist and non-Marxist social theoreticians.

Lectures: 3 hours per week for two terms.

Open to all students

332 Philosophy of the Social Sciences

Following the distinction between natural and social sciences, this course will be concerned with philosophies of the social sciences. We will investigate the structure, methodology and problems of these sciences toward understanding and clarifying how they function as quasi-separable disciplines and how they contribute to a wider understanding of man in his varied social relations.

Text will be *Readings in the Philosophy of the Social Sciences*, ed. by May Brodbeck. This course is recommended only for those who have some background in methods and problems in this area of scientific concern and who have related philosophical interest and/or training.

Lectures: 3 hours per week for two terms.

333 Philosophical Foundations of Democracy

Democratic theory from the 17th century to the present. In addition to explicating the principal tenets, attention will be given to critiques of democracy based on different conceptions of man and its functions within the context of capitalist economic relations. Readings will include selections from Locke, Jefferson, Marc, Smith, Dewey and Marcuse.

Lectures: 3 hours per week for two terms.

Open to all students

334 Forces Shaping Culture

A tour through various interpretations of contemporary culture. Despite wide diversities all the thinkers studied have shifted their frame of reference from microcosm to macrocosm.

Readings:
    J. K. Galbraith: *The New Industrial State*.
    H. Marcuse: *One Dimensional Man*

H. Arendt: *The Human Condition*
H. Cox: *The Secular City*
K. Popper: *The Open Society and its Enemies*
L. Mumford: *The City in History*
M. Eliade: *The Sacred and the Profane*
M. McLuhan: *Explorations in Communications*

Plus selected readings from Marx, S. Giedeon, D. Reisman, and J. P. Sartre.

Lectures: 3 hours per week for two terms.

Open to all students

340 Metaphysics

Discussion of the question "What is Being?" (Parmenides, Plato, Aristotle) — The theory of Forms and Aristotle's criticism. Substance — four causes — potentiality and actuality (Aristotle). Causality of *Esse* (St. Th. Aquinas).

Lectures: 3 hours per week for two terms.

Texts: Cornford, *Plato's Theory of Knowledge* (The *Theatetus* and *Sophist* of Plato); Aristotle, *Metaphysics*; St. Th. Aquinas, *De Ente et Essentia* (On Being and Essence).

Prerequisite: one previous course in Philosophy

341 Knowing and Reality

A contemporary thinker upholds the thesis that the basic structure of reality, insofar as it lies within human experience, is "isomorphic" with the structure of human knowing and may be deduced from an analysis of the latter. In other words, metaphysics has its basis in cognitional theory. This course will be devoted to an examination of this thesis and of its philosophical implications.

Lectures: 3 hours per week for two terms.

Open to all students

350 Epistemology

A study of characteristic problems in epistemology with particular emphasis on the analysis of questions in terms relevant to their historical and systematic contexts.

Lectures: 3 hours per week for two terms.

Prerequisite: one previous Philosophy course

351 Theory of Knowledge

One fairly central issue cutting across a number of thinkers and disciplines is the genesis of ideas themselves and the features distinguishing them from opinion or belief. It would appear to focus attention on the act of insight itself. It would be one way of coming to terms with the wide variety of investigators and fields of investigation. Many questions spin off from such an an initial approach, and these fairly accurately define the course:
    —What makes an idea true, or original, or creative?
    —How does a person perceive reality?
    —Do the conclusions of artists have any relationship to those of scientists, and vice versa? Is there any way to reconcile specialized knowledge of a few well-defined areas, with an integral awareness of human society?

—In an era of information explosion, what strategies are open to a person enabling him to come to terms with a possibly excessive input?
—In the history of human experience, why do ideas change?
—Is there any relationship between an idea and the culture from which it springs?

Readings: E. Hall: *The Silent Language;* B. Lonergan: *Insight;* R. Descartes: *Meditations;* F. Nietzche: *Selected Essays;* A. Koestler: *The Act of Creation;* E. H. Gombrich: *Art and Illusion;* M. Palanyi: *Personal Knowledge;* Wofflin, H., *Principles of Art History;* M. McLuhan: *Understanding Media;* Donald Schon: *Technology & Change;* K. Boulding: *Beyond Economics;* T. de Chardin: *Phenomenon of Man;* A. Whitehead: *Modes of Thought,* and others.

Lectures: 3 hours per week for two terms.

Prerequisite: one previous Philosophy course

352 Problems in the Theory of Knowledge

Study of texts of Plato, Aristotle, Thomas Aquinas, Spinoza, Leibnitz, Locke, Berkeley, Hume, Kant, and Peirce. Discussion of contemporary trends in philosophy of knowledge.

Lectures: 3 hours per week for two terms.

Prerequisite: one previous Philosophy course

353 Contemporary Theories of Knowing

Through selected readings, an attempt will be made in this course to introduce the student to a wide range of epistemological viewpoints held by present-day thinkers.

Text: *Philosophy of Knowledge: Selected Readings.* Ed. by R. Houde and J. P. Mullally, J. B. Lippincott Co.

Lectures: 3 hours per week for two terms.

Open to all students

360 General Dialectics

Studies in the practical structure of decisive argument and the theories upon which it is based.

Readings: Plato, Aristotle, Abelard, Thomas Aquinas, Ramus, Hegel and others.

Lectures: 3 hours per week for two terms.

Open to all students

361 Logic and Scientific Method

An analysis of fundamental concepts and techniques of Aristotelean and modern formal logic followed by a discussion of the nature of scientific knowledge.

Lectures: 3 hours per week for two terms.

Text: I. Copi, *Introduction to Logic,* Macmillan.

Prerequisite: one previous Philosophy course

362 Logic

A study of the basic elements of traditional, deductive logic.

Text: John A. Mourant, *Formal Logic,* Macmillan.

Lectures: 3 hours per week for two terms.

Open to all students

364 Symbolic Logic

Lectures: 3 hours per week.

Open to all students

370 Death as a Philosophical Problem

A consideration of the mortality of man and the implication that this mortality has for a total philosophy of man.

Lectures: 3 hours per week for two terms.

Open to all students

371 Philosophy of Man

Since the course is basically introductory in nature its general aim is to introduce the student to distinctly philosophical considerations using man, both in general and in particular, as the topic of investigation. The general aim is to dispose the student toward asking some of the basic questions regarding man from a philosophical point of view: his particular characteristics, his origins, his destiny, the patterns of his growth and development, his life, growth and death, the various formal aspects of man's life, for example, the social, moral and sexual lives, etc. The hoped for product of the course should be the assimilation of some basic information about man, some philosophical awareness and practice in the way that philosophy handles questions, and some objective clarification of the basic life style that every man has. There are some paperback books to read and some short papers to do.

Lectures: 3 hours per week for two terms.

Open to all students

372 Philosophy of Love

A two-semester topical-historical analysis of love emphasizing its ontological, epistemological, psychological and social dimensions both theoretical and practical. Among the authors to be considered are Plato, Aristotle, Aquinas, Kant, Kirkegaard, Nietzsche, Scheler, Sorokin, Sartre, Horney, Rougemont, Fromm, Reik, Frieds, Rand, Lepp, Nygrens, Lavelle.

Lectures: 3 hours per week for two terms.

Prerequisite: one previous Philosophy course, preferably metaphysics, epistemology, philosophy of man, or social philosophy

Texts: to be determined.

373 Philosophy of Human Nature

The readings in this course will be taken from Descartes, Berkeley, Hume, Bergson, Nietzsche, Ricoeur and Strawson. In this course we will attempt a critical understanding of these major modern and contemporary philosophers and their positions. Included too will be lectures concerning contemporary psychological research and how this challenges and aids the philosophical task. The major emphasis in the course will be to develop a critical understanding of man and the problems he faces in becoming aware of himself.

Lectures: 3 hours per week for two terms.

Open to all students

380 Philosophy of God

The problem of the natural knowledge of God including readings from Plato, Aristotle, Anselm, Aquinas, Descartes, Hume, Pascal, Kant, Hegel, Feuerbach, Marx, Kierkegaard, Newman, Nietzsche, Sartre, Ayer and Russell.

Lectures: 3 hours per week for two terms.

Open to all students

381 Philosophy of Religion

A detailed study of excerpts from philosophers representing the major attempts to give a proof of the existence of God (Plato, Anselm, Aquinas, Descartes, Kant and some contemporary authors). A discussion of influential forms of Atheism.

Lectures: 3 hours per week for two terms.

Open to all students

Text: J. Hick: *The Existence of God.*

Readings: J. A. Robinson: *Honest to God.* E. Fromm: *Psychoanalysis and Religion.*

382 Contemporary Religious Philosophy

The course offers a critical assesement of whether, in the light of modern developments in Philosophy, contemporary thinking man can responsibly maintain a religious belief in God.

Lectures: 3 hours per week for two terms.

Texts: Ferré, Frederick, *Basic Modern Philosophy of Religion,* Charles Scribner's Sons, N.Y., Heim, Karl, *Christian Faith & Natural Science,* Harper & Row; Whitehead, Alfred North, *Religion in the Making,* World Pub. Co.; Whitehead, Alfred North, *The Modes of Thought,* Macmillan; Denkins, David, *Guide to the Debate about God,* Westminster Press.

Open to all students

390 Literature and Philosophy

The course studies the relationship between literature and Philosophy. It will cover the works of great writers from ancient to modern times, examining the interpretation they have given to *Life, Man* and *Society.*

Lectures: 3 hours per week for two terms.

Open to all students

391 Philosophy of Biology

The course presumes some previous and practical knowledge of biology. Its general purpose is to give the biology-oriented student the opportunity to consider some philosophical problems that the science of biology raises. The course should provide the student with the technical skill of cross-relating his biological knowledge to other fields in an effort to shed some light on the problems proper to biology. If the student can gain a wider appreciation of the applications and significance of the problems of biology in terms of human meaning and value, the aim of the course will have been satisfied. As concrete means to the stated aim, we will consider a set of loosely related problems which have a common and strong orientation to human biology: evolution, life, genetics, growth and variation, constitution, sex, ecology. The classes will be in lecture and seminar form; the student will be responsible for the biological background and the research needed for the adequate presentation of the philosophical consideration of biological problems.

Lectures: 3 hours per week for two terms.

Prerequisite: one previous Philosophy course, courses in Biology highly recommended

392 Aesthetics

The notion of creative art as knowledge, as involved in the creation and appreciation of the artifact; taste and value judgment in relation to the ethical, religious and psychological dimensions of art; the relationship of creativity and taste to the social and cultural environments, with critical attention to any dualistic bias which would relegate artistic meaning to "mere aesthetics".

Lectures: 3 hours per week for two terms.

Readings include: Ernst Fischer, H. Marshall McLuhan, Arnold Hauser, Maritain, Dewey, Van der Leeuw, Vivas, Auerbach and Ben Shahn.

Prerequisite: Interview with professor

393 Philosophy of History. (History 309)

The problem of historical knowledge and explanation and its relation to ideological, metaphysical and religious ideas of historical development and of the meaning of history. Study of selected texts of St. Augustine, Hegel, Marx, Heidegger, Collingwood and others.

Lectures: 3 hours per week for two terms.

Prerequisite: one previous course in Philosophy

394 Philosophy of Education

Examination of philosophical positions underlying educational theory. A study of the problems which arise when a theory of education is put into practice. Consideration of trends in Philosophy of Education today.

Text: Shermis, S. S., *Philosophic Foundation of Education,* American Book Company.

Lectures: 3 hours per week for two terms.

Open to all students

410 Ancient Philosophy

A study of the major figures in Greek and Roman Philosophy from Thales to Plotinus.

Lectures: 3 hours per week for two terms.

Prerequisite: one previous course in Philosophy

411 Aristotle (Classics 421)

A thorough study of Aristotle's philosophy in the (translated) texts, including *Categories 1-5, Posterior Analytics, Physics, On the Soul,* and *Metaphysics.*

Lectures: 3 hours per week for two terms.

Prerequisite: one previous course in Philosophy

420 Mediaeval Philosophy

The aim of the course is to link mediaeval philosophy with ancient and contemporary problems. The historical and philosophical background: Plato and the Academy, Late Antiquity; the Greek and Christian *Logos;* Patristic Period; Plotinus and St. Augustine; St. Augustine's *Confessions* and Modern Existentialism; Boethius and Abelard — the problem of Universals; Aristotle's entry into the Middle Ages; St. Th. Aquinas; the continuity of the Augustinian tradition — *The Mind's Road to God* (St. Bonaventure).

Texts: St. Augustine, *The Confessions;* Boethius, *The Consolation of Philosophy;* St. Bonaventure, *The Mind's Road to God; Selections from Medieval Philosophers,* ed. R. McKeon.

Lectures: 3 hours per week for two terms.

Prerequisite: one previous course in Philosophy

429 Renaissance Philosophy

A study of the major authors of the Renaissance, such as: DaVinci, Michaelangelo, Erasmus, Copernicus, Montaigne, Kepler, Galileo and Bruno.

Lectures: 3 hours per week for two terms.

Prerequisite: one previous course in Philosophy

431 British Philosophy

A detailed examination of some major concepts in the philosophy of Bacon, Francis, Locke and Berkeley. A course designed for Majors & Honours' students in Philosophy.

Lectures: 3 hours per week for two terms.

Prerequisite: A minimum of two previous courses in Philosophy is strongly advised, at least one is required

450 German Philosophy

German Idealism: A textual study of Kant's *Critique of Pure Reason* and Hegel's *Phenomenology of Spirit.*

Lectures: 3 hours per week for two terms.

Prerequisite: one previous course in Philosophy

451 Development of Marxist Thought

A brief survey of some major themes in the writings of Marx; a study of the historical development of Marxism as exemplified in such thinkers as Lenin, Trotsky, Lukacs, Gramsci, Althusser and Sartre.

Prerequisite: Either Philosophy 423, 313, 318, 333, 410, 417 or Political Science 315, or with the permission of the instructors

Lectures: 3 hours per week for two terms.

461 Analytic Philosophy

Close classroom study of Ludwig Wittgenstein's two classics, Tractatus (1st term) and Investigations (2nd term). Personal research on preparatory philosophers and other analysts (1st term), and on alternative theories of language (2nd term). Theory and practice of a methodological philosophizing.

Lectures: 3 hours per week for two terms.

Open to all students

470 Contemporary Philosophy

Reading and discussion of selected texts in contemporary philosophy. Special attention will be given to existentialism, Marxism and theories of personality.

Lectures: 3 hours per week for two terms.

Readings: A. Camus, *The Outsider,* Penguin.
K. Dabrowski, *Positive Disintegration.* Little, Brown.
Encyclical "Pacem in terris": The American Press.
Encyclical "On the Development of Peoples", U.S. Catholic Conference.
W. Kaufmann, "Existentialism from Dostoevsky to Sartre", Meridian Books.
H. Marcuse, "One-dimensional Man", Beacon Press.
P. Teilhard de Chardin, "The Future of Man", Collins.

Prerequisite: one previous course in Philosophy

471 Phenomenology and Existentialism

A study of the works of Husserl, Heidegger, Merleau-Ponty, Sartre and Ricoeur.

Lectures: 3 hours per week for two terms.

Prerequisite: one previous course in Philosophy

480 American Philosophy

A study of 19th and 20th century American Philosophers, with special emphasis on the pragmatists.

Lectures: 3 hours per week for two terms.

Prerequisite: one previous course in Philosophy

481 Bernard Lonergan: *Insight*

Insight, a study of human understanding as developed by Bernard Lonergan. The emphasis of the course would be epistemological, not ontological. An effort through illustrations to lead a student to an understanding of the act of understanding itself. Illustrations would be in the field of Mathematics, Physics, Chemistry, Economics, Sociology and Literature.

Lectures: 3 hours per week for two terms.

Prerequisite: one previous course in Philosophy

482 Tutorial: Neo-Thomism

Authors to be studied: Lonergan, Rahner, Coreth, Maréchal.

Registration by permission of the instructor.

491 Chinese Philosophy

The course in Chinese Philosophy is an introductory course which uses the philosophical history of ancient China as a model to illustrate the rise of philosophical thought in the mind of man. In a sense ancient Chinese philosophy is a preview of the development of Western thought. By reading and studying the ancient Chinese scholars: Confucius, Mo-Tzu, Mencius, Chuang-Chou, Lao-Tzu, Hsun-Tzu, Sun Tet Sen, and lastly Mao Tse Tung, the student can come to appreciate the philosophical mode of consideration and gain an understanding of the development of Western thought by comparing what he knows of his own intellectual tradition with an alternate line of development. The course is taught from the point of view of a Western philosopher. And there will be several paperbacks to read as well as some short papers to write.

Lectures: 3 hours per week for two terms.

Open to all students

521 Seminar: Approaches to Philosophy

Prerequisite: Major or Honour student in Philosophy in 3rd or 4th year.

Meetings: 2 hours per week for two terms.

522 Seminar: Situation Ethics

Prerequisite: Major or Honour student in Philosophy in 3rd or 4th year.

Meetings: 2 hours per week for two terms.

523 Seminar: Political Philosophy

Prerequisite: Major or Honours student in Philosophy in 3rd or 4th year.

Meetings: 2 hours per week for two terms.

524 Seminar: Philosophy of Science

Prerequisite: Major or Honour student in Philosophy in 3rd or 4th year.

Meetings: 2 hours per week for two terms.

PHYSICS
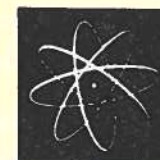
Associate Professor and Chairman	C. E. Eappen.
Professors	S. N. Bagchi, Rev. H. J. MacPhee, S.J.
Associate Professor	R. L. Kovacs.
Assistant Professors	C. S. Kalman, T. A. Kovats, J. Shin.
Senior Lab. Demonstrator	S. Markiza.

Courses leading to an Honours B.Sc. in Physics

FIRST YEAR	SECOND YEAR**	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Mathematics 231 Mathematics 234 Philosophy Physics 205 Physics 220 Physics 301 Physics 309	Philosophy Physics 306 Physics 310 Physics 307 Physics 320 Physics 304 Physics 305 Theology	English Physics 403 Physics 404 Physics 408 Physics 411 Physics 410 Theology or Philosophy

Courses leading to a B.Sc. with a Major in Physics

FIRST YEAR	SECOND YEAR**	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Mathematics 231 Mathematics 234 Philosophy Physics 205 Physics 220 Physics 301 Physics 309	Philosophy Physics 302 Physics 304 Physics 307 Physics 320 Theology	English Physics 403 Physics 310 Physics 306 Theology or Philosophy

Courses leading to a General B.Sc. in Physics

FIRST YEAR	SECOND YEAR**	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Mathematics 232 Philosophy Physics 201 Physics 205 One Elective from Biology Chemistry 231 Geot. Sc.	Philosophy Physics 307 Physics 311 *Science Elective 1 Theology	English Philosophy or Theology Physics 302 Physics 304 *Science Elective II

*Subjects to be decided by the Department.
**Not offered 1970-71.

302 Modern Physics. Full Course.

Part One: Special relativity, quantum effects, particle aspects of electromagnetic radiation, wave aspects of material particles, nuclear atom and Bohr theory, elementary quantum mechanics of atoms.

Part Two: X-ray spectra, radioactivity, nuclear structure, accelerators and detectors, nuclear reactions.

Lectures: 3 hours per week for two terms.

Text: Weidner and Sells, *Elementary Modern Physics* (Allyn and Bacon.)

303 Modern Physics. Half Course.

This is Part One of Physics 302, taken during the first term.

304 Thermodynamics. Half Course.

An introductory course in thermodynamics and kinetic theory. It includes the first and second laws of thermodynamics with ample applications and introduces the Helmholtz and Gibbs functions.

Lectures: 3 hours per week, first term.

Text: Sears: *Introduction to Thermodynamics, Kinetic Theory and Statistical Mechanics* (Addison Wesley).

305 Statistical Mechanics. Half Course.

Lectures: 3 hours per week, second term.

Text: to be announced.

306 Modern Physics and Introduction to Quantum Mechanics. Full Course.

Black body radiation and Planck's hypothesis of quanta, Photon theory (photoelectric effect, Compton effect, Brehmstrahlung), Rutherford scattering and nuclear model of the atom, Bohr theory and old quantum mechanics (correspondence principle, phase integrals), Schrodinger equation, barrier, well potentials, harmonic oscillator, one-electron atoms, magnetic moments, spin, identical particles, multielectron atoms, molecules.

Lectures: 3 hours per week for two terms.

Lab: One period per week for two terms.

Text: To be announced.

307 Electronic Circuits. Full Course.

AC and DC network theory, introduction to semiconductor theory, analysis of half-wave and full-wave power supplies and filter networks, voltage clamper, double and n-tupler, transistor principles, amplifiers and their equivalent circuits, using h-parameters, vacuum triodes and pentodes, analysis of power amplifiers, oscillators, high frequency and pulse, circuits.

Note: Emphasis will be made on solid state devices.

Lectures: 3 hours per week, first term, 2 hours per week, second term.

Lab: One period per week for two terms.

Text: Millman and Halkias: *Electronic Devices and Circuits* (McGraw-Hill.)

310 Theoretical Mechanics II. Half Course.

Plane motion of a rigid body, motion with respect to non-inertial frames, motion of a particle in space, motion of a rigid body about a fixed point, introduction to Lagrange's and Hamilton's equations of motion, introduction to the theory of small oscillations.

Lectures: 3 hours per week, first term.

Text: Prepared notes.

311 Theoretical Mechanics. Full Course.

A course treating most of the topics of Physics 309, 301 and 410, but with simpler applications.

Lectures: 3 hours per week for two terms.

Text: Prepared notes.

320 Methods of Mathematical Physics II. Full Course.

General concepts of function, continuity, differentiation, integration, convergence, uniform convergence, etc., partial differential equations of Physics; function spaces and orthogonal sets of functions; Fourier integral; boundary value problems, Sturm-Liouville problems; special functions (Bessel, Legendre, etc.); topics in complex functions and applications.

Lectures: 3 hours per week for two terms.

References: Sagan: *Boundary and Eigenvalue Problems of Mathematical Physics* (Wiley); Weinstock: *Calculus of Variations* (McGraw-Hill); Tolstov: Fourier Series (Prentice Hall); Churchill: Fourier Series and Boundary Value Problems (McGraw-Hill); Churchill: *Complex Variables and Application* (McGraw-Hill).

403 Electromagnetic Theory. Full Course.

Derivation of the laws of electrostatics and magnetostatics from the basic experimental laws, method of images, delta functions, Maxwell's equations, wave solutions in various media, wave guides, solutions of Laplace's equation, Helmholtz equation, and wave equation by Green's functions; multipole fields, interaction of charged particles, radiation of moving charges, Abraham-Lorentz theory.

Lectures: 3 hours per week for two terms.

Text: Jackson: *Classical Electrodynamics* (John Wiley).

References: Becker and Sauter: *Electromagnetic fields and interactions* (Blaisdell). Pannofsky and Phillips: *Electricity and Magnetism* (Addison Wesley).

404 Solid State and Nuclear Physics. Full Course.

Lectures: 3 hours per week for two terms.

Lab: One period per week for two terms.

Text: To be announced.

408 Quantum Mechanics. Full Course.

Operator formalism, measurement, correspondence principle, angular momentum, matrix representations, spin angular momentum, approximate methods, Dirac electron, quantisation of electromagnetic fields, scattering.

Lectures: 3 hours per week for two terms.

Text: To be announced.

410 Advanced Theoretical Mechanics. Half Course.

Variational principles in mechanics, Lagrange's equation of motion, central orbits and Rutherford Scattering, kinematics of rigid body motion, rigid body equations of motion, small oscillations of discrete particles and of continuous media, Hamilton's equations of motion, canonical transformations, Hamilton-Jacobi theory.

Lectures: 3 hours per week, second term.

Text: Goldstein: *Classical Mechanics* (Addison Wesley).

411 Special Relativity. Half Course.

Classical relativity, first and second postulates, Lorentz transformation, time dilation, length contraction, velocity and acceleration, world vectors, momentum and energy, center of momentum frames, collision problems, dynamics of a particle, covariant Lagrangian and Hamiltonian equations of motion, geometry of space-time.

Lectures: 3 hours per week, first term.

Text: Smith: *Introduction to Relativity* (W. A. Benjamin).

References: Synge: *Relativity, the Special Theory* (North Holland). Hagerdon: *Relativistic Kinematics* (W. A. Benjamin).

POLITICAL SCIENCE

Associate Professor and Chairman	H. Habib
Associate Professor	K. Oh
Assistant Professors	R. Coyte, L. Laszlo, J. Moore, D. Porter (Centre for African Studies)
Lecturers	M. Danis, W. Sadi
Sessional Lecturers	R. P. Duder, E. R. M. Griffiths, D. Vince

Courses leading to a B.A. with a Major in Political Science

FIRST YEAR	SECOND YEAR****	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Classics 112 or 202 or 212 or 221 English French Philosophy 200 POLITICAL SCIENCE 500 Theology	Philosophy POLITICAL SCIENCE (Three Electives) One Elective*	POLITICAL SCIENCE (Three Electives) Theology** One Elective*

A Major in Political Science consists of a minimum of six full courses in the subject. A student majoring in Political Science must include Political Science 500 in his programme. A student may substitute any course from the Social Sciences or the Humanities for a Political Science elective with the approval of the Political Science Department.

Courses leading to a B.A. with an Honours in Political Science

FIRST YEAR	SECOND YEAR****	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Economics 100*** Philosophy POLITICAL SCIENCE 500 POLITICAL SCIENCE 595H Theology One Elective*	Philosophy POLITICAL SCIENCE (Three Electives) One Elective*	POLITICAL SCIENCE 795H POLITICAL SCIENCE (Three Electives) Theology**

*Elective: any course in the Humanities or Social Sciences other than Political Science.
**If the Theology requirement is fulfilled in the First Year, then a student will be able to take a Political Science elective in his Fourth Year.
***If Economics 100 has been taken in First Year then an elective from Economics or Sociology may be taken.
****Not offered 1970-71.

An Honours in Political Science consists of a minimum of six full courses in the subject and an Honours Senior Seminar. A student honouring in Political Science must include Political Science 500 and 595H in his Sophomore Year, 795H in his Senior Year. A student may substitute any course from the Social Sciences or the Humanities for a Political Science elective with the approval of the Political Science Department. All Honours students must pass a comprehensive oral examination in their Senior Year.

Honours courses are designated by an H. They are open to Political Science Majors and to Majors and Honours students from other departments with the permission of the Department of Political Science.

500 An Introduction to Political Science. Full Course.   H. Habib

A basic course in the fundamentals and significance of Political Science.
Lectures: 3 hours per week for two terms.
Text: Merkl, *Political Continuity and Change*, Harper and Row.

595H Political Philosophy. Full Course.   J. Moore

From ancient Greece to the Renaissance.
Lectures: 3 hours per week for two terms.
Prerequisite: Political Science 500, or approval of the Department of Political Science. Students wishing to pursue graduate studies in Political Science are urged to take this course.
Text: Readings from the major political philosophers of the period.

610 International Politics. Full Course.   K. Oh

A theoretical analysis of inter-state relations, drawing upon the development in the Foreign Policy and Diplomacy of the major powers.
Lectures: 3 hours per week for two terms.
Prerequisite: Political Science 500, or approval of the Department of Political Science.
Text: Crabb, *Nations in Multipolar World*, Harper and Row.

620 Canadian Government. Full Course.   D. Vince

An institutional and functional analysis of the political process in Canada.
Lectures: 3 hours per week for two terms.
Text: Dawson, *Government of Canada*, University of Toronto Press.

630 American Government. Full Course.   R. Coyte

A study of the American Political Institutions.
Lectures: 3 hours per week for two terms.
Text: Burns and Peltason. *Government of the People*, Prentice-Hall.

640 The Soviet Union. Full Course.   L. Laszlo

Government and Politics of the Soviet Union. Basic theories of Communism: evolution of the Soviet System.
Lectures: 3 hours per week for two terms.
Text: Fainsod, *How Russia is Ruled*, Harvard.

650 British Government and Politics. Full Course.   R. Coyte

Government and Politics in Britain with particular emphasis on political parties, changing role of the legislature and executive, and the Public Corporations. The role of the Commonwealth today.
Lectures: 3 hours per week for two terms.
Texts: Morrison, *Government and Parliament*, Oxford; Stankiewicz, *Crisis in British Government*, Oxford.

660 Comparative Government. Full Course.   H. Habib

A survey of contemporary political systems, forces and problems in Western Europe with special emphasis on France, Germany, and the United Kingdom.
Lectures: 3 hours per week for two terms.
Text: Carter-Herz, *Major Foreign Powers*, Harcourt, Brace and World.

670H Government and Economic Policy. Full Course.   R. Coyte

The role of government in the economic life of different nations; the relation of economic and political power; the changing balance of public and private power in the economic system.
Lectures: 3 hours per week for two terms.

680H Behavioral Theory and Approaches of Political Science. Full Course.

A systematic study of modern theories of political behavior with emphasis on behavioral methodology and survey techniques. It includes an introduction to behavioral approaches, analysis of system theories and attempts at survey research.
Lectures: 3 hours per week for two terms.
Prerequisite: Political Science 500, or approval of the Department of Political Science.

690 Political Theory. Full Course.

A general survey from Plato to the present.
Lectures: 3 hours per week for two terms.
Text: Sabine, *A History of Political Theory*, Holt, Rinehart and Winston.

695H Modern Political Philosophy. Full Course.   J. Moore

From the Reformation to the Twentieth Century.
Prerequisite: Political Science 500, or approval of the Department of Political Science.
Lectures: 3 hours per week for two terms.
Text: Readings from the major political philosophers of the period. Students wishing to pursue graduate studies in Political Science are urged to take this course.

710 International Law. Full Course.   H. Habib

An introduction to International Law.
Lectures: 3 hours per week for two terms.
Texts: Brierly, *The Law of Nations*, Oxford; Whitaker, *Politics and Power*, Harper and Row.

712 International Organization. Full Course. W. Sadi

A survey and analysis of attempts to institutionalize order and change in the international society. Chief emphasis will be on the United Nations.
Lectures: 3 hours per week for two terms.
Text: Claude, *Swords into Plowshares*, Random House.

720 Politics of French Canada. Full Course. M. Danis

A study of French Canadian institutions and a survey of French Canadian political thinking.
Lectures: 3 hours per week for two terms.

721 Federalism. Full Course. M. Danis

A comparative analysis of the major classical federal systems of government with emphasis on the Canadian Federation.
Lectures: 3 hours per week for two terms.
Text: Wheare, *Federal Government*, Oxford.

723 Seminar on Canadian Foreign Policy. Full Course.
R. P. Duder, D. Vince

An analysis of the development and the present problems of Canadian foreign and defense policies.

725 An Introduction to Law and the Canadian Constitution. Full Course.

An introduction to law in general and the Civil Code in particular, with references to the Criminal Code and Companies Act. This course will also deal with the Canadian Constitutional System and its major interpretations by the Courts.
Prerequisite: Political Science 500 or 620, or approval of the Department of Political Science.
Lectures: 3 hours per week for two terms.

728 Public Administration. Full Course.

A theoretical study of government management and institutions, based on the Canadian administrative experience and related to Anglo-American comparative practice.
Lectures: 3 hours per week for two terms.
Texts: Hodgetts and Corbett, *Canadian Public Administration*, Macmillan; White, *Introduction to the Study of Public Administration*, Macmillan.

729 Seminar on Local Government in Canada. Full Course.
E. R. M. Griffiths

Governments of Cities, Towns, and Countries. Relations with provincial governments and other agencies.

730 Latin American Government. Full Course. J. Moore

An analysis of the historical background and of contemporary political processes.
Lectures: 3 hours per week for two terms.
Text: Needler, *Political Systems of Latin America*.

735 The Politics of Race. Full Course. D. Porter

A comparative study of the racial factor in contemporary politics. Several political systems will be examined, with special emphasis on white-dominated Southern Africa, Colonial Algeria, and the United States.
Lectures: 3 hours per week for two terms.
Texts: van der Berghe, *South Africa: A Study in Conflict*, California; Fanen, *The Wretched of the Earth*, Grove Press; *The Autobiography of Malcom X*, Grove Press.

740 Contemporary Politics of the Far East. Full Course K. Oh

An analysis of the political developments of China and Japan since the 19th Century with special emphasis on the traditional institutions and social structures; their transformation brought about by the impact of the West; the governments and politics of China and Japan and the use of Communism.
Lectures: 3 hours per week for two terms.

742 Seminar on Communism in East Asia. Full Course. K. Oh

An intensive analysis of communism as it relates to the development of political ideas, institutions, and domestic and foreign policies of East Asian countries. Some of the topics to be examined are: (1) ideological factors, (2) socio-political basis, (3) institutional organizations, (4) political leaderships, (5) tactics and strategies, and (6) communist movement of non-communist party-states.

745 Eastern European Governments. Full Course. L. Laszlo

A study of the constitutional, political, and administrative systems of the East European states (East Germany, Poland, Czechoslovakia, Hungary, Roumania, Yugoslavia, Bulgaria, Albania).
Text: Skilling, *The Governments of Communist East-Europe*, Thomas Crowell.
Lectures: 3 hours per week for two terms.

750 African Government and Politics. Full Course. D. Porter

Colonialism, imperialism and the rise of nationalism; government and politics of the independent African states.
Lectures: 3 hours per week for two terms.

se.   Staff

PSYCHOLOGY

Associate Professor (Chairman)	J. J. Lavery
Associate Professors	P. Babarik, M. V. Maheux
Assistant Professors	J. H. Bauer, H. W. Ladd, R. M. Lambert, E. Mouledoux, S. W. Sadava
Lecturer	B. Raeburn

PREAMBLE

The Department of Psychology offers a Major programme leading to both a B.A. and a B.Sc. The curriculum is designed to provide a general cultural training and to give adequate preparation for graduate studies in Psychology.

A Major in Psychology consists of a minimum of six courses in the subject, including Introduction to Psychology, Statistics and Research Methods. B.Sc. students must include Physiological Psychology.

Courses leading to a B.A. with a Major in Psychology

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Psychology 202 Classics French Philosophy PSYCHOLOGY 201 Theology	PSYCHOLOGY 305 Theology Three Electives**	English Philosophy Three Electives**

Courses ing to a B.Sc. with a Major in Psychology

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Psychology 202 Chemistry 221-222 English Philosophy PSYCHOLOGY 201 Theology	Philosophy PSYCHOLOGY 305 Three Electives**	Philosophy or Theology PSYCHOLOGY 401 Three Electives**

*Second year not offered 1970-71 but courses available separately.
**Students may choose their electives from Biology, Chemistry, Communication Arts, English, French Studies, Modern Languages, Psychology, Sociology, etc. B.A. students may choose Physiological Psychology as an elective with the permission of the Chairman of the Psychology Department. In choosing their electives, students should consult as to prerequisites with the Departments concerned.

201 Introduction to Psychology. Full Course.

H. Bauer, J. Lavery, Barbara Raeburn, S. Sadava

Presents a biological approach to the study of mind and behavior. Research in the areas of learning, sensation and perception, intelligence, motivation, emotion will be discussed.

Prerequisite to all other courses in Psychology.

Lectures: 3 hours per week for two terms.

203 Canadian Society
L. Snider

(Not offered in 1970-71)
An exploration of the structure and dynamics of Canada with special emphasis upon its socio-economic class system. Using age, race, religion, ethnicity and sex as variables, comparisons will be made between Canada and other Western societies, particularly that of the United States. Inferences will be limited to those with empirically rooted validity and reliability.

Prerequisite: Sociology 100 or 201.

205 Criminology and Delinquency
V. Tramontana

(Not offered in 1970-71)
Criminal and delinquent behaviour are analyzed from various approaches. Problems in defining crime and the criminal are discussed. The etiology of crime and criminal typologies are considered in terms of their implications for programmes of crime prevention and the treatment of offenders. Special problems of the youthful offender are studied. The structure and process of criminal justice administration are considered.

Prerequisite: Sociology 100 or 201.

207 Introduction to the Study of Poverty
M. Arguelles-Canive

Twentieth Century North American Poverty is seen in terms of inequality. An examination of inequalities in income distribution, assets, basic services, education and social mobility, political position and status and self-respect among different groups in society. The emergence and situation of the "new poor" in Canada and the United States and selected contrasts elsewhere. Theories of inequality-reduction underlying contemporary social and economic policies are analyzed.

Prerequisite: Sociology 100 or 201.

Text: To be announced.

301 Race and Ethnic Relations
M. Arguelles-Canive

A study of interethnic contact with particular reference to concepts such as interethnic conflict, ethnic stratification, pluralism, assimilation, acculturation, and emigration. Major theories of prejudice and discrimination and the social significance of the concept of race will be examined.

Prerequisite: Sociology 100 or 201.

Text: To be announced.

303 The Sociology of Urban Regions
J. Tascone & M. Arguelles-Canive

(Not offered in 1970-71)
A study of the process of urbanization as a world phenomenon. Analyses of urban ecology, urban social organization and structures, urban "personalities", leisure and human relations in cities form the principal areas of study in this course. City planning and redevelopment programmes are critically examined.

Prerequisite: Sociology 100 or 201.

305 Marriage
J. Tascone

An introduction to the sociology of the family using a developmental framework and beginning with personality formation, pre-dating, dating, mating and courtship and ending with the engagement and wedding. Marital prediction and adjustment tests and studies are examined. Problems of the contemporary marriage in the light of rapid social change in the past and present are discussed.

Prerequisite: Sociology 100 or 201.

Text: Kephart, *The Family, Society and The Individual*, 2nd edition.

307 Social Stratification
L. Snider

An examination of vertical and horizontal divisions within primitive and modern societies drawing from the classic studies of social class systems completed by sociologists and anthropologists.

Prerequisite: Sociology 100 or 201.

Text: To be announced.

309 Mass Communication
T. McPhail

The focus of this course will be on the nature of communication as a social process, the relative influence and effect of person to person and mass-media to person communication in relation to attitude formation and change, behaviour, values and society in general. Particular emphasis is placed on the capacity of mass media to generate social action under varying social conditions.

Recent empirical studies are examined.

Prerequisite: Sociology 100 or 201.

Text: To be announced.

311 Small Group Interaction
T. McPhail

An introduction to structures and processes of the internal dynamics of small groups and their relationship to the individual and larger social systems. On the basis of field and laboratory research the impact of small groups will be examined with emphasis on cohesion, norms, leadership, communications and participation.

Prerequisite: Sociology 100 or 201.

Text: To be announced.

401 Social Change
L. Snider

Social change is distinguished from social dynamics early in the term. The major substantive changes of the past two centuries are analyzed as are the theories which attempt to explain them. Methods and findings of recent studies of change are critically examined as are programmes of planned change and social engineering.

Prerequisite: Sociology 100 or 201.

Text: To be announced.

403 Problems in Sociology — Seminar　　　J. Tascone & Staff

A discussion of the conceptual, methodological, theoretical, and ideological problems confronting contemporary Sociology and sociologists. Some consideration is given to Sociology as an enterprise in the academic and non-academic spheres of modern, complex and rapidly changing societies.

Prerequisites: Full fourth year standing in Sociology AND approval of Department. Normally approval will not be given to a student who has less than an overall 70% grade level in all of his post-high school studies.

HALF COURSES — SECOND TERM

202 Mass Society　　　L. Snider

Collective behaviour including fads, fashions, crazes, mobs, riots, social movements and publics are analyzed and explained within a social-psychological framework. The origins and dynamics, internal and external, of social action and pressure groups are discussed. Mass communications, in terms of form and content, are studied as factors in the various forms of collective behaviour. The implications of mass leisure with population qualities such as age, sex, racial and religious factors in urban centers are appraised.

Prerequisite: Sociology 100 or 201.

Text: To be announced.

204 Case Studies in Dominant-Minority Relations
　　　M. Arguelles-Canive

A consideration of patterns of adjustment following interethnic contact, including a comparative analysis of the traditional, social, and cultural structures of Canada, the United States, Union of South Africa, Brazil, Mexico and Cuba. Special attention will be given to empirical studies of racial conflicts, discriminatory practices and social consequences of marginality.

206 Social Deviance　　　L. Snider

An examination of deviations from social norms which encounter social forms of disapproval and to which concepts and theories derived from contemporary scientific sociology and social psychology may be applied.

Prerequisite: Sociology 100 or 201.

Text: To be announced.

208 Advanced Poverty Workshop　　　M. Arguelles-Canive

Establishing the extensiveness of Canadian poverty. A critique of major public and private institutions, counter-institutions and alternative programmes providing assistance to the "poor". Field work experience as participant-observer in selected community action programmes in the Montreal area. (Limit of 25.)

Prerequisites: Students who want to enroll in the advanced section must meet one of the following requirements:
   a) successful completion of the introductory section (Sociology 207);
   b) completion of one advanced sociology course, preferably urban sociology, race relations, or criminology; or,
   c) permission of the instructor.

Text: To be announced.

302 Population and Demography　　　G. Dewey
(Not offered in 1970-71)

An examination of present and future population densities, growth and composition and of factors related to population or demographic changes. Special attention is directed in the last half of the term to the "population explosion" as a social problem.

Prerequisite: Sociology 100 or 201.

304 Organizations and Associations　　　T. McPhail

The formal and informal systems operating within large scale rational structures and voluntary associations are objectively analyzed and appraised. Patterned interaction and functional configurations between individuals within the organization or association and between organizations and other associations are examined; particularly the implications of the superordinate-subordinate relationship, leadership, morale and productivity; organizational conflict and change.

Prerequisite: Sociology 100 or 201 or Departmental Approval.

Text: To be announced.

306 The Family　　　J. Tascone

An analysis of the family as a basic social institution within the structural-functional framework. Patterns of interaction between family members and between the family and other social institutions are studied. Sources of strain and tension in those relationships and the devices for the release of tension are discussed.

Prerequisite: Sociology 100 or 201.

Text: Kephart, *The Family, Society and The Individual*, 2nd ed.

308 Sociology of Religion　　　G. Dewey

An exploration of the reciprocal influences of religion and religious behaviour on the one hand, and of culture and society on the other within a symbolic interaction framework. A study of the social correlates of approved and disapproved religious actions receives special attention.

Prerequisite: Sociology 100 or 201.

Text: To be announced.

310 Sociology of Developing Countries　　　Staff
(Not offered in 1970-71)

An exploration of the ramifications of modernization upon the institutional structures of developing nations. The organizing principle of the course is from the perspective of social change and the following dimensions of modernization will be emphasized: Theoretical approaches to social change, evolution, Marxism, motivation, structural differentiation, economic development, diffusion and urbanization; also, aspects of secondary modernization will be studied, e.g., structural dualism, power and social protest and revolution.

The class will be small in size; the emphasis will be on student participation.

Prerequisite: Sociology 100 or 201 or approval of Department of Sociology or Centre for African Studies.

402 Political Sociology
T. McPhail

Sociological and social psychological determinants of political power, political parties, voting behaviour and socio-political movements are analyzed objectively and critically. Leadership and the cycle of leadership are studied within a social-psychological framework.

Prerequisite: Sociology 100 or 201.

Text: To be announced.

404 The Sociology of Education
J. Tascone & M. Arguelles-Canive

An analysis of the social relationships emerging within a formal educational system. Special emphasis will be upon teacher-student patterns in the classroom, teacher-administrator patterns with the school, plus teacher-teacher and student-student relationship within the informal network of a school. Teaching as a profession and the various sub-cultures of the student population are also examined.

Prerequisite: Sociology 100 or 201.

Text: To be announced.

DEPARTMENT OF THEOLOGICAL STUDIES

Associate Professor and Chairman	Rev. G. O'Brien, S.J.
Professor	Rev. C. Henkey, Rev. E. O'Brien, S.J. (Director, CTI)
Associate Professor	Rev. W. Bedard, O.F.M., Rev. W. Browne, S.J.
Assistant Professors	Rev. R. Breen, P. Garnet, J. Hofbeck, P. Jones, Rev. P. Moroziuk, C. Paris, G. P. Richardson, M. Spicer, A. Webster, S. Wesolowsky
Lecturers	J. Collins, Rabbi M. Halpern, Rabbi L. Poller

Courses leading to the Honours B.A. in Theology

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Classics 112 or 202 or 212 or 221 French Philosophy THEOLOGY (Three Electives)	Philosophy Social Science THEOLOGY (Three Electives)	Philosophy THEOLOGY (Three Electives) One Elective

Courses leading to a B.A. with a Major in Theology

FIRST YEAR	SECOND YEAR*	THIRD YEAR	FOURTH YEAR
Discontinued — See Collegial Program	Classics 112 or 202 or 212 or 221 English French Philosophy THEOLOGY (Two Electives)	Philosophy Social Science (Two Electives) THEOLOGY (Two Electives)	Philosophy Philosophy Social Science THEOLOGY (Two Electives)

*Not offered 1970-71.

PREAMBLE

The Department of Theological Studies offers a variety of comprehensive courses in theology and religion from a strictly academic viewpoint. These courses make up the core of the offerings in the department. Here the department sees its vital place within the structure of a university.

There is a wide selection of courses for those students who opt for a double major in theological studies. These courses are designed so as to be relevant to the student's second major. Interdisciplinary courses are encouraged. Because of the many areas included within the field of Theological Studies, the department relates its program to literature, social sciences, and other disciplines. For major and honors students and other qualified candidates, there are seminars and tutorials. The department also offers specialized courses for its major and honors students in preparation for professional and graduate studies.

The courses offered by the department are intended to contribute to the student's intellectual growth by asking those further critical questions that carry on the human discussion within a university.

215 Introduction to the Old Testament. Full Course. P. Garnet

A religious studies course, which will be a survey of the contents of the Old Testament in the context of ancient Middle-Eastern history as revealed by archaeology and contemporary documents, literary analysis and development of religious ideas. Special attention will be given to Judges, Isaiah and Ezekiel.
Lectures: 3 hours per week.

217 Theology of Judaism. Full Course. Rabbi M. Halpern

A survey of the influence of charismatic persons upon the development of Jewish thought and ideals, attitudes and practices. Jewish concepts of universalism, morality, and human responsibility, will be explored against the ever-evolving conditions of Jewish existence.
Lectures: 3 hours per week.

219 The Theology of Judaism. Full Course. Rabbi L. Poller

(Not offered 1970-71)

The historical development of present-day Jewish doctrines, rituals, observances, customs and practices. Beginning with Biblical origins and proceeding through all the significant events that form Jewish history and heritage, including where Judaism differs from Christianity and concluding with modern trends in Judaism.
Lectures: 3 hours per week.

239 The Ecumenical Movement. Full Course. R. Breen

This course will trace the development of the Ecumenical Movement both within Protestantism, Anglicanism and Orthodoxy through the World Council of Churches and within the Roman Catholic Church. The student will be introduced to the main theological problems which have been treated at the World Conferences on Faith and Order since 1927.
Lectures: 3 hours per week.

243 The Converging Traditions. Full Course. P. Jones

A study of the origins and developments of the Orthodox, Protestant, and Roman Catholic branches of Christianity. Modern difficulties hindering union of these branches. Historical, Psychological, Liturgical, and Sociological obstacles to unity. The Churches and modern society. The need for renewal.
Lectures: 3 hours per week.

305 Renewal in the Liturgy. Half Course. First Term. J. Collins

Liturgical celebration both manifests and realizes the essence of the Christian mystery. The course will present the theological reasons for renewal in the Liturgy as well as evaluate the most recent reforms. The course will also include the study of the direction of future developments.
Lectures: 3 hours per week.

306 The Eucharist and Ecumenism. Half Course. Second Term J. Collins

The Eucharist is the celebration of Christian unity. We will study the contemporary renewal of the theology and practise of the Eucharistic Celebration taking place in both Protestant and Catholic Churches and its very important implications for practical ecumenism. This study will include the question of intercommunion.
Lectures: 3 hours per week.

311 Contemporary North American Judaism. Full Course. Rabbi L. Poller

Its historical, philosophical and theological developments with special considerations given to 20th century patterns and problems.
Lectures: 3 hours per week.

312 Jesus of Nazareth. Full Course. P. Garnet

What can now be known historically about the founder of the Christian religion? What was the nature of the authority (if any) he claimed? What was his diagnosis of the cause of the human predicament and what remedies did he propound?
Lectures: 3 hours per week.

313 The Theology of Hope. Full Course. W. Bedard

This current development among Catholic and non-Catholic theologians will be studied in texts from Moltmann, Pannenberg, and Metz. For "the futuristic humanism with which it carries on conversation" some collateral reading will be expected. The student will endeavour to situate the new thinking in the context of biblical theology. Hence there will be constant reference to Scripture and the theological material in the *Jerusalem Bible*.
Lectures: 3 hours per week.

314 Theology of Symbolism. Full Course. W. Browne

A theological evaluation of the artistic expression of man's religious attitudes as seen in dance, painting, sculpture, music, architecture.
Lectures: 3 hours per week.

315 Theology of Religions. Full Course. G. O'Brien

A consideration of the basic religious attitudes and postures of primitive man and of the nature and role of religion in his life. An attempt will be made to assess the contribution of the religion of primitive man to certain historical religions.
Lectures: 3 hours per week.

317 Authority, Freedom and Anarchy. Full Course. P. Richardson

361
359
409

Every institution of society shares in the tension produced by tendencies toward or away from authoritarianism — and the reaction this creates. Christianity has always had difficulty with this issue. The course covers: modern cultural expressions of the problem; a philosophical evaluation; the resolution offered by the first century church.

Lectures: 3 hours per week.

318 Newman. Full Course. A. Webster

21
1/
57
X

The continuing relevance of Newman as studied through his writings. This study will lead into an exploration of the contemporary issues on 1) Modernism, 2) The relation between faith and reason, 3) The development of Christian doctrine.

Lectures: 3 hours per week for two terms.

M — 1
W — 2

320 Covenant and Fulfilment (Biblical Theology). Full Course.
W. Bedard

313
325
426

An in-depth reading of Christianity's background, history and inspiration. The focal point is the Covenant in the Sinai Desert, which created the people of God. The Covenant is traced in its ups and downs to an initial great fulfilment in Christ with his promise of ultimate fulfilment in the eschatological People of God. A new awareness of Covenant is seen in Vatican II's document on the Church and in the current "theology of hope".

Lectures: 3 hours per week.

321 Theology of Politics. Full Course. A. Webster

8
7
21
X

A study of a variety of political forms of human existence in space and time, and of different political theories. This course will deal with the historical reciprocity between political structures and the religious expressions of man's social and political existence.

Lectures: 3 hours per week.

T — 1
T — 1

322 Introduction to the Prophets. Half Course. First Term.
W. Browne

314
363
447

A study of Isaiah and some of the minor prophets. We shall study the original meaning of the prophecies, their fulfilment in Christ, and their relevance for modern man.

Lectures: 3 hours per week.

323 Theology of the Psalms. Half Course. Second Term. W. Browne

The Psalter is a unique collection of prayers bringing together all the spiritual aspirations of man in his search for God. We shall study the Psalms in their historical setting, their structure and significance, with special emphasis on the Passover and the Paschal Mystery.

Lectures: 3 hours per week.

Bedard 325-27
Collins 305-4

1/2

325 Reality of God. Half Course. First Term. W. Bedard

313
320
426

Certain images of God had been questioned as too remote from an age that is secularized, urbanized, and anguished. This gave rise to a new interest in "the compassionate Christ." That movement has now been followed by a "theology of the future" in which God has "future as his essential nature," and whose promises are the creative forces in history. The course will study and evaluate these advancing trends in the light of biblical theology.

Lectures: 3 hours per week.

1/2

327 Reality of Grace. Half Course. Second Term. W. Bedard

Grace as empowering men to respond to God's self-communication. Grace as making alienated servants into sons. Sonship in the Old Testament. Christ, Son of the Father and brother of men. St. Paul and St. John on sonship. The distinction between nice people and new men. Adult responsible sonship (Harvey Cox). Religious experience; social change; eschatology.

Lectures: 3 hours per week.

328 Philosophy of Religion I. Full Course. P. Garnet

312
215
411
414

A study of representative approaches in the past to the problems of personal immortality, the nature of ultimate reality, religious language, the knowledge of God, the relationship of science to religion, free will and the existence of evil.

Lectures: 3 hours per week.

329 Communist-Marxist Critique of Religion. Full Course.
P. Moroziuk

We shall consider the origin and development of soviet communism (historical dimension); its materialist (marxist) interpretation of God, man, society, evil, truth and freedom (philosophical dimension); and its fundamental dynamic power (religious dimension) as distinct from the driving force of Christianity. The significance and direction of the current marxist-Christian dialogue will be considered. An in-depth study of the communist marxist critique of religion will be conducted and in the light of this critique the position of the 20th-century Christian will be indicated.

Lectures: 3 hours per week.

333 The Church: Conflict and Growth. Full Course. G. O'Brien

315

Historical cultural, and theological currents of thought have served to shape Christianity. The urge to be contemporary and the need to be traditional is a pressing concern. The course will try to discover the effects on the Church of her encounter with Reformation, Modern Science, Enlightenment and the cultural and social upheaval of the twentieth century.

Lectures: 3 hours per week.

338 Marriage. Full Course. J. Collins

305-6 An historical and sacramental approach with an awareness of the contributions other sciences make to the understanding of the human reality of marriage, e.g., medicine, sociology, psychology, and philosophy. The human actions of married people are essential to the sacramental reality of Christ's presence in the world through the incarnation of his love and revelation of himself in the sacrament of matrimony. The course will be concerned with deepening our understanding of the mystery of love which is Christian marriage along with an investigation of the challenges facing those preparing for and beginning married life.

Lectures: 3 hours per week.

341 Christ in Tradition. Full Course. P. Jones

243 380 A study in the teaching, doctrine, and legend surrounding the person of Jesus Christ in Christian tradition. The New Testament record, writings of the earliest Christian community, and non-Christian records will be studied in historical and theological perspective. Later developments in Anselm, Luther, and the Death of God movement. The Christ-figure in modern cinema and novel.

Lectures: 3 hours per week.

342 Contemporary Atheism. Full Course. J. Hofbeck

The Christian of today has to face an accelerated process of secularization and new forms of atheism. This course intends to analyse the contemporary phenomenon "atheism", to examine its roots, to raise the question of its positive meaning, and to define a Christian attitude towards it. Through this dialogue with atheism we would attempt to uncover the essentials of Christianity itself.

Lectures: 3 hours per week.

345 The Problem of Evil. Full Course. S. Wesolowsky

An exploratory course that will treat the problem of evil both historically and thematically: historically, by considering occurrences of various modes of speaking about evil, thematically, by considering the methodological issue involved in the legitimacy, relevance, and dynamics of such an enquiry.

Lectures: 3 hours per week.

346 Contemporary Russian Religious Thought. Full Course. P. Moroziuk

This course will consist in the confrontation with Russian personalities and in a study of their ideas, problems, and solutions to these problems: Fedor Dostoevsky, Vladimir Solovev — one of the most original Christian thinkers of the 19th century; Nicolai Berdyaev — a marxist who becomes one of the most inspiring philosophers of the 20th century.

Lectures: 3 hours per week.

349 Seminar on KARL RAHNER. Full Course. J. Hofbeck

The work of Karl Rahner, one of the most influential theologians at the present time, consists almost exclusively of short essays on different topics. Studying his easiest writings we will concentrate our attention on the *method* of Karl Rahner in order to learn with him how to face intellectually, as Christians, the problems of a changing world.

Lectures: 3 hours per week for two terms.

350 Kierkegaard and Paradox. Full Course. M. Spicer

The course is meant to be an introduction to the literature of Kierkegaard covering the range of his aesthetic, ethical and religious writings. We ought to discover the Kierkegaard behind the authorship and with an eye for interpretation see in this Kierkegaard a literary artist, an exacting philosopher, and a significant theologian who is more rational than he is traditionally considered to be. We will have to ask ourselves what does the Paradox, the God-Man in Time, entail for Kierkegaard.

Lectures: 3 hours per week.

352 Nineteenth Century Criticism of Christianity. Full Course. M. Spicer

The course entails: a) an introductory consideration of the Enlightenment, in particular, Lessing as theologian; b) theological perspectives of Schleiermacher and Hegel; c) the theological reductions and criticisms of Strauss, Feuerbach, Marx, Kierkegaard and Nietzsche.

Lectures: 3 hours per week.

359 Sociology and Theology of Judaism 100 B.C. to 100 A.D. Full Course. P. Richardson

317 361 409 An examination of the variety of Jewish groupings, and their divergent beliefs during this crucial 200-year period. Christianity is put in context as an offshoot of Judaism. Attention will be paid to the conflicts and tensions between parties. Material will include: Apocrypha and Pseudepigrapha, Dead Sea Scrolls, New Testament, early Rabbinic writings.

Lectures: 3 hours per week.

361 Hermeneutics: An Approach to Biblical Interpretation. Full Course. P. Richardson

317 359 409 A comprehensive approach to the problem of understanding the Bible. What is the relationship of a text belonging to the past to the present age? What are the implications of a developmental approach to the Bible? How do local specific cultural factors affect Biblical statements in the light of today's different cultural situation? Problems of history, myth, symbol, event, as well as morality and doctrine will be considered.

Lectures: 3 hours per week.

363 Images of the Church. Full Course. W. Browne

314 322 447 A study of the main images of the Church in the New Testament. From this study we hope to show how the unity of mankind is the goal of the Judaeo-Christian tradition.

Lectures: 3 hours per week.

366 Theology of Revelation. Half Course. First Term. — C. Henkey

The basic context for theology is not whatever man can think, guess, explore about God, but what God has revealed of himself. So theology is based upon the fact of dialogue between God and man. Our intention is to explore the possibilities, the structures of the historically unfolding divine self-communication.

Lectures: 3 hours per week.

367 Christianity and Culture. Full Course. — A. Webster

The analysis of the historical and cultural background within which the Judaeo-Christian order of meaning emerges and develops. This course will explore the foundations and evolution of Christianity and Western Civilization.

W – 1
F – 1

Lectures: 3 hours per week.

368 The Holy Books. Half Course. Second Term. — C. Henkey

The sacred books seem to belong to the necessary structure of a high-religion. We shall review the principal sacred books from the Book of the Dead of Egypt up to the Book of Mormon or even Mrs. M. B. Eddy's Science and Health. On different degrees and in varying patterns those holy books claim divine origin, inspiredness.

Lectures: 3 hours per week.

371 Psychology and Religion. Full Course. — M. Spicer

Keeping a religious dimension in view, the course entails: a) an analysis of Freud and Jung; b) a survey of insights into the human structure in such writers as, Fromm, Horney, Sullivan, Allport, Rogers, Maslow, and May.

Lectures: 3 hours per week.

374 Myth and Faith. Full Course. — S. Wesolowsky

This course will explore the situation of man seen as a *speaking being*. Since myth is speech, does demythologizing mean an attempt to have man speak more adequately or does it seek to reduce man's speech to a boring monotone? Is holding a myth a faith or is faith a myth? What is the relation of myth and faith to mystery?

Lectures: 3 hours per week.

375 Christian Perspectives of Marriage. Full Course. — C. Paris

A consideration of marriage both as institution and way of life. The first section will consider the Christian institution in its history and tradition following its development within the various periods of Western Christian society. Marriage as life experience will be discussed in the second semester. The specific aim of this section will be to clarify how modern human sciences enlighten our knowledge of the Christian concept of marriage.

Lectures: 3 hours per week.

376 Authority in the Church. Full Course. — R. Breen

239

The problem of authority in the Church will be studied in this course. After delving into the characteristics of all Christian authority as seen in the New Testament, especially in the modus agendi of Christ, a detailed study will be made of the question of the transmission of that authority—apostolic succession—and of the exercise of doctrinal authority. The traditional debate will be studied as well as the more recent ecumenical prospectus.

Lectures: 3 hours per week.

379 Seminar in Martin Luther. Half Course. First Term. — P. Jones

The context of the Reformation as an on-going movement. Luther's character and concerns. Luther's differences with traditional Catholicism: Justification, Authority of Scripture, Priesthood of all believers, Doctrine of Sin. Luther and later developments. Luther's doctrines in modern writing.

Lectures: 3 hours per week.

380 Seminar in Anglicanism. Half Course. Second Term. — P. Jones

341
243

The Church in England before the Reformation. Final separation from the Roman allegiance. Development of a specific character in Anglicanism. Spread throughout the English-speaking world. Modern Anglicans from J. H. Newman to the present. Anglicanism and modern society.

Lectures: 3 hours per week.

381 Theology in the City of Man. Full Course. — J. Collins

305-6
338
467
408

A survey of the response being made by Christian theology to the challenge of Secularism in the 20th century. In a "world come of age" modern man questions the value of religion. The need for prayer, a Church, and even a God is challenged. The course will include an evaluation of the response made to this challenge by some of the major Christian theologians—both Protestant and Catholic.

Lectures: 3 hours per week.

382 Pneumatology. Full Course. — C. Henkey

The modern dynamic world view raises the question: what is the force, power, energy, *dynamis* which on the one hand animates the evolutionary thrust, the *élan vital* in the universe, and on the other as inspiration, genius, creative spontaneity, conscience, breaks out like a source from the inmost center of our personal existence. Using Teilhard's expression, the course is a systematic study of the "within" in the cosmos and in ourselves.

Lectures: 3 hours per week.

383 Introduction to Systematic Theology. Full Course. — C. Henkey

Things are meaningful only in the context of the whole. As our personal existence is not a solitary status, but is a co-existence, relatedness, its fulfilment could not be impersonal. It has to be a dialogical self-realization towards somebody else, ultimately towards an absolute person. It is the challenge of systematic theology to elaborate the context for, and to study the overall structure of, this dialogical existence. The latter is the horizon in which the existence of man and his world obtains an intelligent and positive meaning.

Lectures: 3 hours per week.

384 Religious Basis of Anarchy. Full Course. P. Moroziuk

This course will consist in the reading of the writings of the anarchists (esp. Russian, though not exclusively): Michael Bakunin; Peter Kropotkin; and Leo Tolstoy to determine: (a) the driving force (religious dimension) of this movement; (b) the philosophical expression of this force; (c) and the world-view therein contained. The principles of 19th century anarchism will be utilized to evaluate the current 20th century anarchism.
Lectures: 3 hours per week.

385 Issues in Christian Anthropology. Full Course. S. Wesolowsky

An inter-disciplinary course, dealing with both anthropoligical and theological material, which will be a study of a number of structures of human existence and their interrelations, not only in their individual aspects, but also in their social and historical dimensions. The play, work, sexual and political elements of men's existence will be emphasized.
Lectures: 3 hours per week.

388 Man Believer, Man Unbeliever. Full Course. C. Paris

How does man confront his search for meaning in belief or unbelief? A study of man as he is in today's world and the varieties of belief or unbelief that become possible for him today. What is belief or what is unbelief for man of the 70's.
Lectures: 3 hours per week.

389 L'Eglise et la Contre-Réforme. Full Course. C. Paris

Après une introduction générale à l'histoire de l'Eglise, une attention spéciale sera donnée aux hommes et aux thèmes théologiques des 16ième et 17ième siècles. Ces questions seront étudiées non seulement en soi, mais dans la mesure où elles sont en relation directe avec le Christianisme d'aujourd'hui.
Lectures: 3 hours per week.

406 Theology as Art. Full Course. M. Spicer

A research into the imaginative and theopoetic dimensions of theology.
Lectures: 3 hours per week.

407 Christian Marriage in the Modern World. Full Course. J. Collins

Guided research in one or more areas studied in Theology 338 with the purpose of contributing to a contemporary theology of marriage.
Lectures: 3 hours per week.

408 Problems in Contemporary Liturgy. Full Course. J. Collins

A more detailed study of the issues involved in contemporary liturgical renewal.
Lectures: 3 hours per week.

409 Ecclesiology from Jesus to Justin Martyr. Full Course. P. Richardson

Directed study of the development of the theology and practice of the Church during a period of rapid development. Study will concentrate on Jesus, Paul, Matthew, First Peter, Revelation, First Clement, Ignatius, Didache, Apology of Aristides, Barnabas, Hermas, Justin.
Lectures: 3 hours per week.

411 Old Testament History and Theology. Full Course. P. Garnet

Literary analysis and historical background in the light of archaeological discovery and contemporary documents. Development of religious ideas, especially on the nature and activity of God, covenant, charisma, sin, punishment, atonement, and salvation.
Lectures: 3 hours per week.

412 Religious Language. Full Course. S. Wesolowsky

A study of religious and theological language in relation to scientific, philosophical and poetic forms of human self-expression.
Lectures: 3 hours per week.

413 Studies in the History of Christianity. Full Course. P. Jones

Seminar dealing with particular aspects of Christian history and doctrine. The aim is to introduce the student to an historical perspective in his theological thought.
Lectures: 3 hours per week.

414 New Testament History and Theology. Full Course. P. Garnet

Religious and cultural background. Literary analysis of the Gospels. The career of Jesus and history of the Church in the first century. Introduction to N.T. theology with special reference to soteriology.
Lectures: 3 hours per week.

415 Studies in Contemporary Theologians (Balthasar, Barth, Przywara, de Lubac). Full Course. S. Wesolowsky

Lectures: 3 hours per week.

421 Theology of Politics. Full Course. A. Webster

A study of the historical reciprocity between political structures and the theological expressions of man's social and political existence.
Lectures: 3 hours per week.

422 New Testament Christologies and The Christ. Full Course.
P. Richardson

Seminars dealing with key sections of the New Testament relating to the person of Jesus of Nazareth. Their sources and the relationship between them will be examined. Knowledge of the New Testament is presupposed.
Lectures: 3 hours per week.

423 Communism and Christianity. Full Course. P. Moroziuk

Specifically guided research into more particular aspects treated in Theology 329.
Lectures: 3 hours per week.

426 Theology of Acts and the Pauline Epistles. Full Course.
W. Bedard

A colloquium. The Acts of the Apostles will be used as background to show how Paul's theology, while rooted in revelation, developed from actual situations. An inquiry into the relevance of Paul's thought for today will be made in terms of religious experience and social change.
Lectures: 3 hours per week.

428 Seminar on Teilhard de Chardin. Full Course. C. Henkey

I. A research into Teilhard's evolutionary worldview which on the one hand is built upon the phenomenological observations of the scientist and on the other on the mystical experience of the cosmic Christ.
II. Special investigation of controversial problems raised by Teilhard's writings such as "the omega point", the problem of evil, the cosmic function of the Eucharist, etc.
Lectures: 3 hours per week.

432 Biblical Foundations of Dogmatic Theology. Full Course.
J. Hofbeck

Explorations in the relationship between scripture and theology and the application of this approach to a number of fundamental themes.
Lectures: 3 hours per week.

433 Richelieu: Theologian and Politician. Full Course. C. Paris

A seminar course on the man who epitomizes the concept that the Church had of itself in the beginning of the seventeenth century: both a spiritual and temporal power. In understanding the man and his period one might be able to understand the role and influence of the Church in this country, particularly at its origins.
Lectures: 3 hours per week.

436 Future of Christianity. Full Course. P. Jones

The role of tradition in shaping the Christian message and community. Trends and dynamisms at work in modern Christianity. The Christian ideas as expressed in theology, novel, and other art-forms.
Lectures: 3 hours per week.

444 Seminar in Contemporary Mass Media and Revelation. Full Course. Confer Communication Arts 450. J. Hofbeck

The most fundamental problems of man will be explored through a systematic encounter of contemporary mass media and Revelation. The approach will be mainly creative with individual and group projects. This encounter should lead to a more explicit awareness of various levels of meaning to be found in contemporary mass media.
Lectures: 3 hours per week.

446 Neoplatonism in Medieval Theology. Full Course. M. Spicer

A research tracing the unfolding of the Neoplatonic thought from the Greek period to the late Middle Ages. The course will also be a reconsideration of the theological import of Neoplatonism.
Lectures: 3 hours per week.

447 Readings in Liturgical Theology. Full Course. W. Browne

Seminar on celebrated theologians concerning the liturgy. Bouyer, Danielou, Jungmann, Rahner, and others.
Lectures: 3 hours per week.

448 History and Eschatology. Full Course. M. Spicer

The course will entail the examination and questioning of various theological interpretations of history as a groundwork for a major research paper.
Lectures: 3 hours per week.

450 Comparative Religion. Full Course. G. O'Brien

A more comprehensive and "in depth" study of aspects treated in more summary fashion in the lectures of Theology 315.
Lectures: 3 hours per week.

452 Modern Ecclesiological Problems. Full Course. G. O'Brien

The tutorial will concern itself with guided research in one or more of the areas treated in Theology 333.
Lectures: 3 hours per week.

453 Theology and Literature. Full Course. G. O'Brien

Individual or group investigation into the theological dimensions of the human problems facing man as seen in the context of modern literature.
Lectures: 3 hours per week.

SCHOLARSHIP, BURSARIES AND AWARDS

Scholarships

THE BANK OF MONTREAL SCHOLARSHIP to a student in Loyola's Department of Communication Arts Radio course. The Award is to the student who is judged to be the best overall participant in the CJAD News Research Team Project.
VALUE: $1,000.00

A scholarship is awarded in recognition of outstanding academic achievement.

A scholarship winner is given the title of Loyola Scholar and a financial award of $100.

Candidates for scholarships must have completed at least one year at Loyola College; these students will not have to apply for scholarship, they will be awarded according to their marks and openings available. All University Scholarships are renewable if the Scholarship Committee feels that the holders have maintained a sufficiently high standing.

No student will be considered eligible for a scholarship who has failed any year in his college or university education. Consideration will, however, be given to the student who has obtained more than a 70% average in each of the two years following the year repeated.

No student with supplemental examinations will be eligible for a scholarship, or if he already holds a scholarship, for its renewal.

If a student holding a scholarship decides to change faculty he will retain the scholarship only on condition that he receives the approval of the Scholarship Committee.

No student may hold more than one scholarship from the College at any one time.

Endowed Scholarships

THE LILLY F. BARRY SCHOLARSHIPS. Three.

THE URSULA CARLING SCHOLARSHIPS. These are an endowment from the estate of the late Mrs. Ursula Carling. Two.

THE CLORAN MEMORIAL SCHOLARSHIP.

THE COLLINS-HEFFERNAN SCHOLARSHIP. Funds from the Mary Ellen Heffernan Bursary and the Nelson Collins Scholarship.

THE CUDDY-STANFORD MEMORIAL SCHOLARSHIP. Funds from the John M. Cuddy Scholarship and from the Stanford Memorial Scholarship.

THE DOWLING-MORIARTY SCHOLARSHIP. Funds from the estate of the late Francis J. Dowling and of the late Mrs. E. Stowell, widow of the late John Moriarty.

THE MRS. F. J. DUCKETT SCHOLARSHIP. From the estate of the late Mrs. F. J. Duckett.

THE FRIENDS OF LOYOLA SCHOLARSHIP. From the funds endowed from the James Corcoran Scholarship, the Rev. William Doherty Scholarship, the Dollard Scholarship, and the Gregory O'Bryan Scholarship, and from the funds given by the Student's Penny Scholarship.

THE ARTHUR HALLEY MEMORIAL SCHOLARSHIP. Endowment from P. F. Halley of St. John's, Newfoundland in memory of his son, Arthur, a graduate of the Pre-Medical class of 1946, magna cum laude, who died on the eve of Convocation.

THE MR. AND MRS. THOMAS WILLIAM KAVANAUGH MEMORIAL SCHOLARSHIP. Donated by the Rev. Thomas W. Kavanaugh.

THE LOYOLA SODALITY SCHOLARSHIP. Funds from the Sodality Scholarship and from the Loyola Scholarship Club Association Bursary.

THE MAHONEY-MURPHY MEMORIAL SCHOLARSHIP. Originally established as the Mother Ellen Memorial Scholarship, and as the John Walsh Murphy Memorial Scholarship.

THE KENNETH J. MCARDLE MEMORIAL SCHOLARSHIP. Donated by Mrs. Mary McArdle as a tribute to the memory of her late husband Kenneth J. McArdle.

THE ST. IGNATIUS PARISH SCHOLARSHIP. Money collected and presented to the St. Ignatius Men's Association and originally known as the Coronation Arts Courses Scholarship.

THE SHARP-O'REILLY SCHOLARSHIP. Funds from the Alice M. Sharp Scholarship and from the Winnifred O'Reilly Memorial Bursary.

Gifts by the College

THIRD YEAR

Arts, number: 16; Commerce, number: 3; Science, number: 11; Engineering, number: 2.

FOURTH YEAR

Arts, number: 11; Commerce, number: 3; Science, number: 17; Engineering, number: 2.

THE BARTLET MEMORIAL SCHOLARSHIP.

THE BARTLETT-DOHERTY MEMORIAL SCHOLARSHIP.

THE GASSON MEMORIAL SCHOLARSHIP.

THE JONES MEMORIAL SCHOLARSHIP.

THE MCCARTHY MEMORIAL SCHOLARSHIP.

THE MCMAHON MEMORIAL SCHOLARSHIP.

THE O'BRYAN MEMORIAL SCHOLARSHIP.

THE O'DOWD MEMORIAL SCHOLARSHIP.

THE PRESIDENT'S SCHOLARSHIPS. Three.

THE J. S. O'NEIL SCHOLARSHIP. Donated by J. S. O'Neil.

Annual Gift Scholarships

THE CHARLES BROWN MEMORIAL SCHOLARSHIP.

THE MRS. CHARLES BROWN SCHOLARSHIPS. Number: Two.

THE GUTELIUS MEMORIAL SCHOLARSHIP.

THE KNIGHTS OF COLUMBUS COUNCIL 284 SCHOLARSHIP.

THE STATE COUNCIL, KNIGHTS OF COLUMBUS, PROVINCE OF QUEBEC SCHOLARSHIP.

The Judith Roman Memorial Scholarship Fund

Established through the generosity of Mr. & Mrs. John Z. Roman offers a limited number of Scholarships to qualified students.

Bursaries

A bursary is a sum of money given to a student in order to assist him financially in the continuation of his studies.

Due to the greatly increased financial aid offered to students from their own governments it has become necessary to insist that all students, including scholarship winners, must apply to the relevant Government Department and must accept maximum aid in loans and bursaries before making an application to Loyola for financial aid.

This means that Loyola funds cannot normally be used to compensate for a student's failure to apply for and accept the maximum Government assistance available to them.

Should a student need more than this maximum Government assistance a bursary may be granted.

A bursary will take the form of a credit to the student's tuition account. Ordinarily bursaries will not be awarded to students with less than a 50% overall average. Applications for Bursaries should be made as early as possible to the Director, Financial Aid, Loyola of Montreal.

Government Loan Plans

The Province of Quebec has an extensive program of Student Loans and Bursaries available to students. For application write to:

Students Loans and Scholarships Service, Department of Education, Quebec 4, Quebec.

Ontario — Department of University Affairs, Suite 700, 481 University Avenue, Toronto 101, Ontario.

New Brunswick — Department of Youth & Welfare, Fredericton, New Brunswick.

For the provinces of Newfoundland, Prince Edward Island, Nova Scotia, Manitoba, Saskatchewan and British Columbia write to the Provincial Department of Education.

To be eligible under the plan you must be a Canadian citizen or a landed immigrant and have lived in the province to which you are applying for at least 12 months. A single student must apply to the province in which his parents live.

United States Students

Maine — Apply through the United Student Aid Fund, Form 1070, available at your bank. Students from other of the United States — Apply to The Higher Education Assistance Corporation. Your bank has these application forms. Due to the current tight money situation, it is essential to apply to the bank where your parents have an account.

NOTE: FOR ANY OF THE ABOVE IT IS IMPORTANT TO APPLY AS EARLY AS POSSIBLE. YOU DO NOT HAVE TO WAIT FOR REGISTRATION.

The IBM Thomas J. Watson Memorial Bursaries

Donated by the International Business Machines Company Limited as part of the IBM Thomas J. Watson Memorial Bursary Program. Number: Two. Value $500 each. Awarded annually to needy undergraduates in any year and any faculty who are in good academic standing. Apply to the Director, Financial Aid, as soon as possible.

The Loyola African Bursaries

Type "A". Value: varies, but includes full tuition, registration fee, room and board, etc. Awarded to qualified and deserving students from any country in Africa who intend to return to aid in their homeland's development upon graduation. Type "B". Value: varies, but includes full tuition and registration fee. Awarded on the same conditions as Type "A".

The Loyola Bursary for the Blind

Number: one. Value: full tuition for one year, renewable. To a blind student who is qualified to follow regular courses.

Touche Ross & Co. Bursary

Number: one. Value: $200.00. Awarded annually to a student who is completing his third year and will be entering his final year, majoring in Accountancy in the Faculty of Commerce, and who intends to pursue the qualification of Chartered Accountant.

The Birks Family Foundation Bursaries

A limited number of bursaries are available under this plan. The student's financial need and academic standing will be considered in the granting of these bursaries. Apply to the Director, Financial Aid.

B'nai B'rith Hillel Foundation

A limited number of bursaries are available. Amount of each bursary granted from this fund may vary according to the need of any deserving student in any year or faculty. Apply to Director, Financial Aid.

National Council of Jewish Women of Canada, Montreal Section, Bursaries

A limited number of bursaries are awarded by the Council upon the recommendation of the Financial Aid Director; academic standing and financial need are considered in making the award. Although there is no legal obligation, the Council hopes that the holder will, if possible, return the money at some future time, so that other students may be helped. Apply to the Director, Financial Aid.

Mr. and Mrs. Meier Segals Bursaries

A number of bursaries are available through their generosity to needy students with good academic standing.

Royal Canadian Engineers Memorial Scholarships

Scholarships of up to $500 each are offered annually to students, both male and female, who are attending any educational course of study or practical training course beyond secondary school level. Scholarships are awarded on the basis of merit and need to the most suitable candidates from among those who apply.

A candidate to be eligible for the scholarship must be the child or grandchild of a person who served in any rank in any of the following components of the Canadian Armed Forces:

a) A Royal Canadian Engineer component of the Canadian Army during World War I, World War II, or under the United Nations in Korea; or

b) The Royal Canadian Engineers in the Canadian Army Regular or Permanent Force or Militia or Non-Permanent Active Militia, for not less than three continuous years; or

c) The Military Engineers Branch of the unified Canadian Armed Forces for not less than three continuous years after the First day of February, 1966.

Apply: Deputy Chief of Construction — Military Engineering Advisor, DCC-NEA Building #105, Canadian Forces Headquarters, Victoria Island, Ottawa.

Commonwealth Scholarships

Under a plan worked out at the Commonwealth Education Conference at Oxford in 1959 reponsibility is shared between the Canadian Commonwealth Scholarship and Fellowship Committee and the External Aid Office to enable an increased number of able students to share in the wide range of educational resources available through the Commonwealth. An undergraduate award is made for the period required to enable the student to obtain his degree. For information consult The Canadian Commonwealth Scholarship and Fellowship Committee c/o Association of Universities and Colleges of Canada; or The Director General, External Aid Office. Both at 151 Slater St., Ottawa 4, Ontario.

Loan Funds

Through the generosity of The Birks Family Foundation Fund, the B'nai B'rith Hillel Foundation and the National Council of Jewish Women, Montreal Section, a certain amount of money has been placed with Loyola to help students in an emergency situation. Available, interest free, to all students who demonstrate need and responsibility. Apply to Director, Financial Aid.

The Loyola Alumni Student Loan Fund

The Loan Fund exists to aid students who are in financial difficulties. Because of limited resources, the trustees of the fund normally will consider loans to students who: 1) have been successful in their set of final examinations at Loyola; 2) are prepared to repay the loan by the end of the summer. Applications should be made in writing to: Loyola Alumni Student Loan Fund, Loyola of Montreal, 7141 Sherbrooke Street West, Montreal 262, before DECEMBER FIRST.

Physically Handicapped

Students in any faculty who are Canadian citizens and have been resident and domiciled in Quebec for two years may apply for an outright grant if they have suffered from poliomyelitis, tuberculosis, certain forms of cardiac trouble, or some other physical disability. Apply to Director, Financial Aid.

Children of War Dead (Education Assistance) Act

Under this Act fees up to $800 and monthly allowances are provided for children of Canadian veterans whose death was attributable to military service in World War I, World War II or the Korean War. Apply to the Superintendent of Welfare Services at the nearest DVA District Office.

Imperial Oil Higher Education Awards

Imperial Oil Limited offers annually free tuition and other compulsory fees to all children or wards of employees and annuitants who proceed to higher education courses. Each award is tenable for a maximum of four years. To be eligible a student must attain an average of 70% or higher in the appropriate secondary school examinations in the subjects required for admittance to the approved institution, or must have attained an average of 70% or more in a college year upon which the application is based. Further information and application forms may be obtained from The Secretary, Committee on Higher Education, Imperial Oil Limited, 111 St. Clair Avenue West, Toronto 7, Ontario.

Canadian-Italian Business & Professional Men's Association

Bursaries are awarded to students of Italian origin or descent by the Association. Apply to Mr. Dante Panni, President Trust Fund Committee. Forms available through the Financial Aid Office.

Awards & Prizes

THE GOVERNOR-GENERAL'S MEDAL. Presented by His Excellency the Governor-General of Canada to the outstanding student graduating with the highest overall average in the four years of Arts.

THE MINISTER OF EDUCATION'S SILVER MEDAL. Presented by the Department of Education, Government of Quebec, to the student with the highest overall average in the four years of Science.

THE MINISTER OF EDUCATION'S SILVER MEDAL. Presented by the Department of Education, Government of Quebec, to the student with the highest overall average in the four years of Commerce.

THE LOYOLA ENGINEERING MEDAL. Presented by Loyola to the graduating student with the highest overall average in Engineering.

THE LOYOLA C.O.T.C. MEDAL. Presented to the most representative student among the graduates.

THE WILLIAM H. ATHERTON PRIZE FOR HISTORY. Awarded to a student for outstanding research in Canadian History.

THE BRODRICK AWARD. Established in honor of Dr. Robert Brodrick, Arts '43, and awarded to the graduating student athlete who has distinguished himself in academic and extracurricular endeavors during his four years at Loyola.

THE CANADIAN HAMILTON WATCH AWARD FOR ACCOUNTING. Presented to the student who has most successfully combined proficiency in Accounting with achievement, either academic, extracurricular or a combination of both, in the social sciences or humanities.

THE CANADIAN HAMILTON WATCH AWARD FOR MATHEMATICS. Presented to the student who has most successfully combined proficiency in Mathematics with achievement, either academic, extra-curricular or a combination of both, in the social sciences or humanities.

THE CHEMCELL PRIZE FOR CHEMISTRY. Awarded to the student with the highest four-year average in Chemistry subjects.

THE CHEMCELL PRIZE FOR ENGLISH. Awarded to the graduating student in Arts, taking a Major or an Honours in English, with the highest four-year average in English subjects.

THE CHEMICAL INSTITUTE OF CANADA. Donated by The Chemical Institute of Canada to the third year student taking an Honours in Chemistry with the highest average in his year.

THE PIERRE DESMARAIS PRIZE. Awarded to the student who has distinguished himself, during his last year, by his contribution to non-academic activities.

THE ECONOMICS PRIZE. Granted by Loyola to the graduating student in Arts or Commerce, taking a Major or an Honours in Economics, with the highest four-year average in Economic subjects.

THE EVENING DIVISION MEDAL. Granted by Loyola to the student with the highest overall average in the Evening Division.

THE FRENCH LANGUAGE PRIZE. Donated by the Government of France and awarded to the graduating student who has shown the greatest progress in French language courses.

THE GERMAN LANGUAGE PRIZE. Donated by the Consulate General of the Federal Republic of Germany to the student who has shown the greatest progress in the German Language course offered at Loyola College.

THE KNIGHTS OF COLUMBUS PRIZE FOR CANADIAN HISTORY. Donated by the Knights of Columbus of the Province of Quebec to the student who has obtained the highest mark in Candian History during the current academic year.

LOYOLA PRIZE FOR MATHEMATICS. Donated by Dr. Isaiah S. Benjamin of Montreal to the student graduating in Science or Engineering with the highest four-year average in Mathematics subjects.

THE PHILOSOPHY GOLD MEDAL AWARD. Presented by Loyola to the outstanding graduate in Philosophy and awarded on the recommendation of the Philosophy faculty.

THE PHYSICS PRIZE. Granted by Loyola to the graduating student in Physics with the highest four-year average in Physics subjects.

THE SOCIETY OF CHEMICAL INDUSTRY, CANADIAN SECTION, MERIT AWARD, CHEMISTRY. Presented to the highest ranking (over 75%) student in fourth year, majoring in Chemistry, Chemistry-Physics, or Chemistry-Mathematics, who has completed the course in the normal number of years.

THE DR. JACQUES SMITH MEMORIAL PRIZE. Donated by Dr. Kurt Ekler in memory of Dr. Jacques Smith, a Loyola graduate who died suddenly in 1960 at the age of thirty-six, and awarded to the graduating student with the highest four-year aggregate standing in Pre-Medical studies.

THE SPANISH LANGUAGE PRIZE: donated by Vice-Admiral Wolfgang Larrazabal, Embajador de Venezuela to the student who has shown the greatest progress in the Spanish Language course offered at Loyola College

THEOLOGY MEDAL. Presented by The Most Reverend Norman J. Gallagher, D. D., and awarded to the graduating student who has been the most creative and productive in the field of Theology.

THE MME. ALFRED THIBAUDEAU PRIZE FOR POLITICAL SCIENCE. Donated by Miss Madeleine Thibaudeau in memory of her mother and awarded to the graduating student with the second highest average in the field of Political Science.

THE RENEE VAUTELET PRIZE FOR POLITICAL SCIENCE. Awarded to the graduating student with the highest average in the field of Political Science.

THE MICHAEL WATSON PRIZE. Donated by Loyola to honor the memory of Michael Watson, an outstanding, capable and popular member of the class of 1967, who met his death in a construction accident at the end of his third year, and awarded to the graduating student who has shown academic superiority in the study of Biology.

DIVISION OF STUDENT SERVICES

The Division of Student Services is that dimension of the College which is primarily concerned on a day-to-day basis with student life and learning opportunities outside the classroom. The ultimate purpose of Student Services is to facilitate students' personal growth, organizational development, and exploration of talents and abilities in order that they may more effectively express and contribute to the social milieu. The work of all personnel in the Division of Student Services serves this purpose either directly or indirectly.

This student personnel staff may be divided into two categories for purposes of description. There are specialists such as Director of Financial Aid, Director of Athletics, Director of Men's Housing, Director of Placement, Director of Health Services and their staffs who are concerned with particular facets of student life. Their services are described below. The second category of student personnel staff, generalists, are the Dean of Students, the Assistant Dean of Students, the Dean of Men, the Dean of Women and the Asisstant Dean of Women. This last group of people have some specialized functions which are based largely on individual expertise. For example:

THE DEAN OF STUDENTS is responsible for the work of the whole Division and as such relates to the Administration and the academic offices in the College as well as the formal structures of Student Government;

THE ASSISTANT DEAN OF STUDENTS work with Financial Aid, the Student Court, and research for the Division;

THE DEAN OF MEN works with Foreign Students, Fraternities and Sororities, and Canada Manpower Centre;

THE DEAN OF WOMEN is responsible for the Health Service;

THE ASSISTANT DEAN OF WOMEN is also Director of the Women's Residence.

The central staff of Student Services in addition to special functions, work as a team with student groups as special problems arise from time to time, and they also work individually as counsellors for the special needs of individual students. This "free-wheeling" dimension of the work of student personnel staff can be broadly described as variations on simply "being with" students in the challenges of everyday living.

SPECIALIST SERVICES

THE DIRECTOR OF HEALTH SERVICES is a physician serving part-time at the college and is responsible for the Health Service Programme.

THE COLLEGE HEALTH SERVICE is maintained for the benefit of students who may require medical care and advice. Two nurses are in attendance from 9:00 A.M. to 5:30 P.M. Monday to Friday & from 9:30 A.M. to 1:00 P.M. on Saturday. Two physicians are available for consultation each weekday and appointments can be easily arranged through the nurses. Health Service also offers consultations with psychiatrists who are on campus three times weekly. There is no infirmary on campus so hospitalization, when necessary, is arranged with a local hospital.

REQUIREMENTS:
(1) A physical examination and medical history are required by all first year and transfer students prior to registration.
(2) Smallpox vaccination — unless vaccinated within the past 3 years smallpox vaccination is required.

(3) Tetanus toxoid injections up-to-date — especially for students participating in the athletic programme and/or taking courses which will involve laboratory instruction.
(4) Chest X-ray's will be done at registration at no charge to the students.

MEDICAL EXCUSES will not be issued for missed classes except in the case of a lengthy illness or at examination time. Students requiring medical excuses must be under treatment by the Health Service at the time of their illness.

THE DIRECTOR OF THE CANADA MANPOWER CENTRE has available information regarding career, summer and part-time employment. The placement service is operated by the Canada Manpower Service. The director, with the help of two placement officers, co-ordinates the career planning and placement programme.

THE DIRECTOR OF FINANCIAL AID is responsible for all loan and bursary applications. In addition, all scholarship applications must be made through her office in her capacity as Executive Secretary of the Scholarship Committee. All students with financial problems should apply for advice and aid through her office. Student Insurance problems, as well as Foreign Student Insurance, are handled by this department. It is her responsibility to verify financial positions of all foreign candidates for admission.

THE DIRECTOR OF PHYSICAL EDUCATION AND ATHLETICS is responsible for college, intercollegiate and intramural programmes, as well as non-credit programmes of an instructional nature in physical education and recreation. The coaches work with him and under his direction.

IMPORTANT INFORMATION PERTAINING TO STUDENT LIFE

AN ACCIDENT INSURANCE PLAN giving protection against medical bills incurred as a result of an accident on or off campus, 24 hours a day and 12 months a year, has been initiated by a motion passed in the Lower House of Loyola of Montreal Students' Association on February 23, 1967. Participation in this insurance is a requirement of registration. Those who wish to add sickness to their Accident Policy should consult the Dean of Women.

NON-CANADIAN STUDENTS who are not landed immigrants are required to enroll at registration for a parallel COMPREHENSIVE SICKNESS AND HOSPITALIZATION POLICY because of the very high hospital costs now current in Quebec. Neither Overseas nor United States students are eligible for Quebec's provincial hospital care plan unless they are landed immigrants. Out of province Canadian students may obtain the same insurance if desired. Because of different reciprocal arrangements between provinces and the high cost of sickness, it is strongly recommended. Non-Canadians who are required to enroll for the comprehensive plan at registration may opt out of the coverage if they can present written proof of the equivalent coverage to the Dean of Women within two weeks after registration.

COLLEGE RULES AND REGULATIONS. College policies designed for student conduct are made for the sole purpose of guaranteeing that each member of the academic community has the right to study protected from those who are motivated otherwise.

The Loyola Community recognizes the necessity for maintaining an environment conducive to learning through reasonable campus rules and regulations (applied via adequate, substantive and procedural due process) which encourage the student to be self-reliant and responsible.

Further it is recognized: 1. That such rules and regulations are consonant with the two-fold responsibility of the college to the entire student body and to the student as an individual. 2. That any individual charged with a breach of campus policy be assured a fair and just hearing, be accorded the right to explicitly stated charges, an open hearing, and confrontation of witnesses. 3. That the burden is on the accuser to prove that the accused committed the acts charged, not on the accused to prove innocence.

LIQUOR ON CAMPUS. Students are not permitted to possess alcoholic beverages on the Loyola Campus. Exceptions for group events can be obtained by permission from, and under conditions set by the office of the Dean of Students. Applications for such exceptions must be made one week prior to the event and the Dean of Students office will require written assurance that the laws of the Province of Quebec and the rules of Loyola of Montreal will be observed. However, residence halls shall determine their own policies on the use of alcohol.

ORDERLY CONDUCT. Students are expected to act in an orderly manner on campus. Any student acting otherwise will be subject to penalties according to the gravity of the offense.

DRUGS. The use and/or possession of hallucinogenic drugs, as well as drugs specifically prohibited by law, are not permitted on the Loyola campus. The penalty for the dispensing or sale of drugs on campus may be dismissal.

Respect for college policy requires that each student assume responsibility for his actions, respect constituted authority, protect both private and public property and conduct himself at all times in a lawful manner. This clearly implies that the rights of others are to be respected.

YOUR ATTENTION IS INVITED TO THE FACT THAT REGISTRATION AT LOYOLA OF MONTREAL INVOLVES THE STUDENTS' ACCEPTANCE OF NOT ONLY ACADEMIC REGULATIONS, BUT ALSO THE REGULATIONS GOVERNING STUDENT CONDUCT. THESE RULES ARE SUBJECT TO CHANGE BY ACT OF THE COLLEGE SENATE.

STUDENT HANDBOOK. The Student Handbook published each year is distributed to all students at registration in September. Students are held responsible for knowing and observing the policies contained therein. The Handbook contains a wealth of information which serves as a handy reference for students and faculty alike.

STUDENT COURT. A Student Court composed of five students, one faculty member and one administrator has original jurisdiction over matters involving non-academic student discipline within the College. Consult the Campus Handbook for full details relating to the Court's procedures and authority. Any member of the Loyola community may refer a case to the Court by submitting the details of his complaint in writing to the Presiding Officer.

PHYSICAL EDUCATION AND ATHLETICS

The complete and diversified physical education and athletic curriculum offered by the College has been cited as one of the outstanding contemporary models in the country. The program is conducted as an integrated segment of the school's total curriculum. Its primary aims are to provide an opportunity for all students to participate, not just the dexterous individuals who play varsity sports, and to promote a high degree of physical fitness and mental alertness within the entire Loyola community.

Thirty-three activities are offered under the supervision of a staff of professionally trained instructors and coaches encompassing all popular and individual sports for male and female students; aikido, archery, badminton, basketball, body building, bowling, broomball, cheerleading, curling, fencing, field hockey, figure skating, fitness classes, football, free skating, golf, gymnastics, hockey, judo, karate, majorettes, modern dance, parachuting, physical fitness, sailing, skiing, soccer, swimming & diving, table tennis, tennis, track & field, volleyball, and weight lifting. In major areas of interest there are four different levels of play and instruction; intercollegiate varsity, intercollegiate junior varsity, intramural and physical education classes. Loyola varsity squads successfully compete against other top ranked Canadian and regional United States University teams.

The south campus is the focal point of the College's Physical Education and Athletic Program including full length playing fields for outdoor activities and a new three million dollar physical education centre. Within the confines of the centre are found modern facilities for men and women, featuring an ice-skating arena and a spacious gymnasium able to accommodate 3,000 and 1,500 spectators respectively, a first aid station, administrative offices, numerous dressing rooms, a wrestling and judo room, a completely equipped weight training room, equipment storage rooms, a sports store, lecture hall, food and soft drink outlets, a snack bar, a press box and physiotherapy clinic. The Loyola Sports Hall of Fame is temporarily housed in the main lobby.

RELIGIOUS ACTIVITIES

In order to make concrete and personal the religious truths, which the students have studied in the Theology courses, Loyola College offers a programme of religious activities calculated to nourish and deepen their personal faith.

DAILY MASS. Mass is offered daily Monday to Friday at 12:05 p.m. in the College Chapel. Confessors are available during the Masses. In Hingston Hall Mass is offered daily at 8:00 a.m.

SUNDAY MASS. A University Community Mass is celebrated each Sunday at 11:15 a.m. in the College Chapel. Students and Faculty are invited to attend.

WEEKEND RETREATS. Retreats as well as Religion and Life Study Days are scheduled each year. Dates and location of the Retreats and Study Days will be announced.

CHAPLAIN-COUNSELLORS. Three Chaplains are avilable at all times for religious and personal counselling.

Location of Counsellors:

        Rev. J. O'Neill, S.J. Tel. 262, Room CC-323

        Rev. A. Nelson, S.J. Tel. 325, Room RF-309

   - Rev. N. Konlup. Tel. 364, Room AD-124

STUDENT GOVERNMENT

The Loyola of Montreal Students' Association which became a corporation in 1966, is the governing body of the Student Association. All full-time day students are automatically members. A student activity fee collected from the day students at registration finances the L.M.S.A.

Its general purpose is to: a) form a representative association to promote the educational, social and cultural interests of its members; b) form a representative association to promote the general welfare of its members; c) co-operate with other organizations having similar interests in promoting student activities.

The L.M.S.A. is composed of three elements: the Executive, the Board of Directors (legislative body), and the Senate (judicial body).

The Executive

The President, Vice-President for Internal Affairs, Vice-President for External Affairs, Vice-President for Educational Affairs, and the Vice-President for Financial Affairs. There is also a permanent Treasurer and Secretary. The President and Vice-President for Internal Affairs are elcted annually on a ticket basis, and it is they who appoint the other members of the Executive.

The Executive forms the core of the Executive Council, which is also composed of: Dean of Men, Athletic Association President, Resident Administrative Council President, News Editor-in-Chief, Inter-Fraternity Council President, International Students' President, Women's Association President, Faculty Presidents' Representative and External P.R. Chairman.

The task of the Council is to advise the Executive with regard to the many problems encountered in the policy and decision-making of the Student Association.

The Senate

The judicial body of the L.M.S.A., the Senate is composed of seven members elected by the Board of Directors from a slate prepared by the outgoing Senate. Only students in third or fourth years are eligible for election, and there must be at least three members from each of these years.

The Senate is the body in the L.M.S.A. which has judicial jurisdiction over any matters affecting either student discipline or constitutional interpretation.

The Board of Directors

The Board of Directors is the legislative body of the L.M.S.A. Sixteen members are elected annually as voting members of the Board, in proportion to faculty enrollment. Their primary purpose is the regulation and co-ordination of the policies and activities of the Association in the best interests of the students.

The Board directs the programmes of the students finances, and is in general the sole representative of the Association before the Administration of Loyola. The executive of the association implements its decisions, acts for it before the general public, and before any party having business with students as a group. The non-voting members of the Board include the Chairman, Secretary, Senate Representative, Fr. President's Representative, Publicity Director, and the L.M.S.A. Executive (excepting the President and Vice-President for Internal Affairs).

L.M.S.A. Committees

The workload undertaken by the L.M.S.A. each year is so enormous that committees are formed to bear a large portion of the burden. The committee chairmen are appointed by the L.M.S.A. Executive, which receives applications and interviews from interested students in late spring. The members of the committees are then appointed by the Chairman.

The types of committees range from those undertaking and organizing special events, to those in charge of a specialized political or administrative area of student government. A few examples of L.M.S.A. Committees would be Freshman Reception Association, Carnival, Leadership Conference, and Social Works.

Publications

In 1966 the Board of Directors turned over publishing rights to the Board of Publications whose primary function is to affirm and ensure free responsible student press.

The Board is composed of five voting members, with jurisdiction over the Loyola NEWS, the official student newspaper, the Review, the student yearbook, Amphora, the literary magazine, the Student Handbook, the Student Directory, and all other minor campus student publications.

Social Activities

The chief social events of the year take shape in the Freshman Week, Homecoming Week, the Athletic and Faculty dances, the Winter Carnival, and the L.M.A.A. and L.M.S.A. Awards Banquets.

Societies and Organizations

There are over forty organizations on campus which vary in nature and scope from academic, ethnic, dramatic and musical to progressional, political, recreational and special interest. A few examples of these organizations would be the Commerce Society, Debating and Political Science Students Association.

Drama Society

The purpose of the Drama Society is to actively promote interest in drama on campus and specifically to produce several productions during the academic year.

For the first time, in the academic year 1968-1969, Loyola hired its own full-time Drama Director. For the first time also they produced three major plays: "Oh Dad, Poor Dad, Mama's Hung You in the Closet and I'm Feeling So Sad", "The Firebugs", and "Until the Monkey Comes". This past year there were also workshops in acting, directing and playwriting. This year there will be seven major productions at Loyola. Four will be put on by Loyola itself and three by touring companies.

Fraternities and Sororities

Loyola at present has seven permanently recognized fraternities on campus; Tau Kappa Epsilon and Phi Kappa Theta, both of which are international intercollegiate fraternities, Theta Sigma, Delta Epsilon Rho, Sigma Theta Pi, and Delta Chi Colony, a new intercollegiate group, and Phi Lambda Rho, which pledges men from the Faculty of Science.

Loyola has three sororoties — Phi Delta, Lambda Pi Epsilon and Zeta Tau Omega

An active Interfraternity Council co-ordinates the men's groups and a Pan-Hellenic Council the women's.

Loyola of Montreal Athletic Association

The primary purpose and responsibility of the Loyola of Montreal Athletic Association and that of its executive is assisting the Athletic Director in the promotion of the athletic programme. However, the success of any athletic programme depends upon the student's interest and participation in the variety of physical education activities available.

The LMAA executive consists of a president, a vice-president, a secretary-treasurer, and a publicity chairman. The LMAA Board includes the executive, the Intramural Athletic Council President, the Sports Store Manager, and a representative of each varsity sport. In an attempt to establish a closer union between the LMAA and the IAC, a constitutional amendment was passed recently whereby the LMAA Vice-President also holds the position of IAC President. In the past these two positions were held by separate individuals.

FEES

SCHOLASTIC YEAR-1970-1971

REGULATIONS REGARDING PAYMENT OF TUITION AND FEES.

TUITION AND FEES MUST BE PAID AT THE TIME OF REGISTRATION

However, a student may, in special cases of hardship and with the consent of the Bursar, pay Tuition and Fees in two instalments. The first instalment of Tuition and Fees covering the First term must be paid in full at registration. The second term fees to be paid in full on or before 10th January following. In such cases an instalment fee of $10.00 will be charged. Evidence of Loyola Scholarship Awards or Loyola Bursaries must be submitted at time of registration. If a partial Loyola Scholarship or Bursary is awarded, the balance of Tuition and Fees must be paid at registration. Students who have applied for Provincial or Federal Government Bursaries must still settle their fees at registration in accordance with the above.

Students will not be considered registered and may not attend classes until the required fees have been paid or arrangements for payment made with the Bursar.

FAILURE TO MAKE PAYMENTS OF TUITION AND FEES OR OTHER AMOUNTS OWED THE COLLEGE WHEN DUE OR TO ARRANGE FOR SUCH PAYMENTS BEFORE THEIR DELINQUENT DATES, IS SUFFICIENT CAUSE TO BAR THE STUDENT FROM CLASSES OR EXAMINATIONS AND TO WITHHOLD DIPLOMA, SCHOLASTIC CERTIFICATE OR TRANSCRIPT OF RECORD UNTIL THE DEBT HAS BEEN ADJUSTED WITH THE BURSAR'S OFFICE.

Any damage done to any property of the College will be charged to the offender's account.

Drafts, cheques, money orders, etc., should be made payable at par to "LOYOLA COLLEGE" and addressed to the BURSAR, LOYOLA COLLEGE, 7141 SHERBROOKE STREET WEST, MONTREAL 262, QUEBEC.

All accounts are subject to revision for adjustment of errors. The College also reserves the right to make changes without notice in the published scale of fees.

FEES MUST BE PAID ON DUE DATE. NO BILLS ARE ISSUED
N.B. ALL PAYMENTS MUST BE MADE IN "CANADIAN FUNDS."

TUITION - 3rd & 4th YEAR - UNIVERSITY PROGRAMME

ARTS (GENERAL COURSE)*	**$270.00 per half year**	**$540.00 per year**
COMMUNICATION ARTS*	**287.50 per half year**	**575.00 per year**
SCIENCE*	**287.50 per half year**	**575.00 per year**
ENGINEERING*	**297.50 per half year**	**595.00 per year**
COMMERCE*	**270.00 per half year**	**540.00 per year**

*The above fees were applicable to 1969/70 academic year, and are subject to change for the 1970/71 academic year without notice.

N.B. — IN CASES WHERE CHEQUES ARE RETURNED TO THE COLLEGE MARKED "NOT SUFFICIENT FUNDS" THERE WILL BE A $5.00 CHARGE.

A $15.00 SURCHARGE WILL BE ADDED TO ALL UNPAID FEES AS OF 15TH FEBRUARY.

POSTDATED CHEQUES WILL NOT BE ACCEPTED.

TUITION AND FEES ARE PAYABLE IN "CANADIAN FUNDS."

Student Activity — Payable at Registration.

Student Administrative Council	$16.00
Student Centre Building Fee	10.00
Loyola College Athletic Association	17.00
TOTAL — (Payable at registration)	$43.00

SPECIAL FEES.

Payable at Registration.

Tuition, extra subject (in addition to regular program)	$100.00
Registration Fee (Payable on first entrance only)	5.00
Late Registration Fee — for first day	10.00
Late Registration Fee — each succeding day	3.00
Library Fee	5.00
Medical Fee	3.00
Accident Insurance — Compulsory	5.00
Graduation Fee — 4th year students	20.00
*Comprehensive Sickness and Hospitalization (non-Canadian students require)	25.00
*Lockers: Rental — $5.00	
Locks — 2.00	

* To be paid in cash at Registration. College locks must be used. $1.00 will be refunded at the Bookstore from April 15 to May 15 only, for each lock in good condition, labelled with combination.

Payable on Date of Each Application

Supplemental examination, each	$7.00
Special examinations	15.00
*Transcripts (Full)	1.00
*Transcripts (Partial)	.50
Parking Permit	10.00
Local examination privileges, each examination	15.00

*TRANSCRIPTS ARE RELEASED ONLY WHEN ALL OUTSTANDING BALANCES HAVE BEEN PAID

Duplicate of Official Receipt	2.00

Withdrawals and Adjustments

ANY STUDENT WHO IS FORCED TO WITHDRAW FROM A COURSE OR FROM THE COLLEGE IS REQUIRED TO NOTIFY THE REGISTRAR IN PERSON OR IN WRITING. WITHDRAWAL NOTICES FOR THE PURPOSES OF REFUND WILL BE EFFECTIVE ON DATE OF RECEIPT BY THE REGISTRAR. NO TELEPHONE WITHDRAWALS WILL BE ACCEPTED.

IF, AFTER PAYING THE FEES, A STUDENT FINDS IT IMPOSSIBLE TO CONTINUE AT COLLEGE, A REFUND OF TUITION ONLY WILL BE MADE FROM THE DATE OF WITHDRAWAL ON THE FOLLOWING BASIS:

Registration date to September 30

BASIC CHARGE OF TUITION — $\frac{1}{8}$

October 1 to October 31

BASIC CHARGE OF TUITION — $\frac{2}{8}$

November 1 to November 30

BASIC CHARGE OF TUITION — $\frac{3}{8}$

December 1 to January 15

BASIC CHARGE OF TUITION — $\frac{4}{8}$

January 16 to January 31

BASIC CHARGE OF TUITION — $\frac{5}{8}$

February 1 to February 28

BASIC CHARGE OF TUITION — $\frac{6}{8}$

March 1 to March 31

BASIC CHARGE OF TUITION — $\frac{7}{8}$

After March 31 — NO REFUND

STUDENT ACTIVITY FEE AND OTHER SPECIAL FEES ARE NOT REFUNDABLE.

RESIDENCE

Men

Hingston Hall, completed in 1963 and located on campus, is a modern edifice providing room and board for 307 students. This residence has two four-floor wings, centered by the main entrance and the common lounge. Student recreational facilities, study rooms, offices and chapel are located on the ground floor. Meals are served in an attractive cafeteria. Hingston Hall has 132 single rooms and 84 double rooms available. Room facilities include bed linen and blankets.

The aim of Hingston Hall is to promote the development of interpersonal relationships and relating these to the development of the individual within the College community. This is done in a number of ways; (a) by encouraging the individual to chose his own lifestyle and lead his own life (b) by providing social, educational and athletic programs for the individual in such a broad context that he is able to choose for himself which path he wishes to follow. All Freshmen coming from outside the Montreal area, under twenty-one years of age, are obliged to live in Residence.

Women

The women's residence, Langley Hall, is located at 6900 Sherbrooke Street West, two blocks from the campus. Langley Hall accommodated approximately 125 women in single, double, and triple rooms. The room and board contract includes rental of linen, blankets and pillow. Meals are served at Hingston Hall, the men's residence, on the main campus.

Langley Hall has been provided for women students as an opportunity in para-academic learning. Specifically, the residence affords an experience in group living the desired outcomes of which are personal and social growth. Preference in applications will, therefore, be given to those who are most likely to benefit and/or contribute to such an environment. In addition, the College requires that freshmen under 21 years live in residence unless permission from the Dean of Women is obtained to live off-campus.

Off Campus Housing Policy

All freshmen students under twenty-one years of age not living in the home of their parents or legal guardian, shall be required to live in residence. Exceptions to these policies may be made for sufficient reason by the Dean of Women or the Director of Men's Housing. Permission to live out of residence requires a letter of approval from parents, except, of course, for those over twenty-one years of age. All students living off campus, but not at home, must list their Montreal area address with the Dean of Students office.

Fees for Residence

Parking facilities for resident students are the same as for other students on the campus. Parking permits may be obtained for a fee of $10.00. Residence fees (exclusive of the Christmas holidays) are as follows:

Double Room and Board	$865.00
Double Room and Triple Room and Board (Women's Residence)	865.00
Single Room and Board	940.00
Damage fund	15.00
Residence activity fee	10.00
Room deposit which must accompany each application	50.00

The room deposit of $50.00 will be deducted from the payment due on entrance. The money will be refunded upon request if the student is not accepted or if the applicant cancels the room reservation by September 1, prior to registration.

RESIDENCE FEES MAY BE PAID IN TWO INSTALMENTS. THE FIRST INSTALMENT OF RESIDENCE FEES COVERING THE FIRST TERM MUST BE PAID IN FULL AT REGISTRATION.

THE SECOND TERM FEES MUST BE PAID IN FULL ON OR BEFORE JANUARY FIFTEENTH FOLLOWING.

No student will be permitted into residence before settlement of the account has been made in accordance with the above regulations.

The College reserves the right to make changes without notice in the published scale of fees, if, in the opinion of the College, circumstances so require.

Students will not be considered registered and may not attend classes until the required fees have been paid or arrangements for payment made with the Bursar. Failure to make payments of tuition, fees or other amounts owed the College when due, or to arrange for such payments before their delinquent dates, is sufficient cause to bar the student from classes or examinations and to withhold diploma, scholastic certificate or transcript of record until the debt has been adjusted with the Bursar's Office.

Application for men's residence should be made to the Manager of Hingston Hall, Loyola College, 7141 Sherbrooke West, Montreal 262, Quebec.

Application for women's residence should be made to the Dean of Women, Loyola College, 7141 Sherbrooke West, Montreal 262, Quebec. Application forms and further information may be obtained by writing to the above.

To ensure favourable consideration of your application, it is recommended that applications be submitted prior to August 15.

The College reserves the right to place the student in whatever rooms seem to be best in the interests of the student's programme as a whole, but careful consideration will be given to preferences expressed.

All residence fees are payable IN CANADIAN FUNDS, and cheques will be made payable to Loyola College. Residents are required to vacate their rooms within 24 hours of the last examination.

FACILITIES

BUILDINGS: Loyola College is located on a fifty-acre site in the west end of Montreal. The structures of the College are: the Refectory Building (built in 1916); the Cafeteria and Physical Services Building (1923); the Administration Building (1927); the Chapel and Auditorium (1933); the Central Building (1947); the Drummond Science Building (1962); Hingston Hall (1963); the Georges P. Vanier Library (1964); the Physical Education Centre (1966); and buildings acquired to serve as Women's Residence (Langley Hall, 1967), and Faculty, Administration, and Student Government offices (the Hackett and Cloran Buildings, 1965, and the Centennial Building, 1967).

The latest addition to the College is the W.F.X. Bryan Building (1967). It houses 21 lecture rooms, an auditorium, 2 Biology labs, approximately 15 Psychology labs, and one of the best equipped Communication Arts Departments in Canada, consisting of a combination T.V. Studio and film studio, audio, visual, and lighting control rooms, 2 radio studios, a photography studio, dark room, projection rooms, animation facilities and a multi-media room.

LECTURE AND SEMINAR ROOMS: The 65 lecture rooms and 10 seminars have a total seating capacity of 3398 and 195 respectively. The four auditoria can seat 1,265, the largest being the F.C. Smith Auditorium which seats 570.

LABORATORIES: About 65,000 square feet of floor space is devoted to laboratories, allowing 1,248 student lab facilities at one time. This includes laboratories for Chemistry, Physics, Engineering, Geology, and Biology. In addition there is a calculating room with a seating capacity of 25 and 2 Language Labs with a total seating capacity of 66. The Computing Centre provides facilities to satisfy the computing requirements of students, faculty, and administration. Hardware includes an IBM 1620, a Univac 9200 with on-line communications to a Univac 1108, Datacom terminals communicating with an IBM 360/50, electronic calculators, key punches, and peripheral tabulating equipment. A work area is allocated to students. The Bryan Building houses the Psychology labs which include Human Learning Labs and Surgery Rooms. The Communication Arts Laboratories contain a T.V. Studio, Projection Room, multi-media room, film editing, and photo studios.

MAIN CHAPEL: The College Chapel has a seating capacity of approximately 500.

RESIDENCE: The men's residence, Hingston Hall, provides accommodation for 300 male students; the women's residence, Langley Hall, can accommodate 127 female students.

LIBRARIES: The Georges P. Vanier Library provides students with one of the most modern and well-equipped libraries in Greater Montreal. The library contains close to 125,000 volumes, and more than 4,000 serial publications, spread over three floors. There is a total seating accommodation for 600 students.

The Science Library which is situated in the Drummond Science Building, serves the Biology, Chemistry, Engineering, Geotechnical Science, Mathematics, and Physics Department.

The Library hours are as follows:

VANIER LIBRARY

Monday to Friday (inclusive)	8:30 a.m. to 10:15 p.m.
Saturday	9:00 a.m. to 5:00 p.m.
Sunday	2:00 p.m. to 6:00 p.m.

SCIENCE LIBRARY

Monday to Thursday (inclusive)	9:00 a.m. to 5:00 p.m.
" " " "	7:00 p.m. to 10:00 p.m.
Friday	9:00 a.m.to 5:00 p.m.

The libraries are closed on all legal holidays.

FOOD SERVICES: The Cafeteria which is located on the south side of the Physical Services Building has a seating capacity of 250. Service includes a variety of hot foods and several vending machines.

The dining area in the Refectory Building provides a self-service snackbar and hot meals, with seating accommodation for 180.

For those who bring lunch, the Guadagni Lounge is supplied with vending machines and has a seating capacity of 100.

INCOME AND NEEDS OF THE COLLEGE

THE CAPITAL DEVELOPMENT PROGRAMME The replacement value of Loyola College in buildings and educational equipment is in excess of thirty million dollars. Continual building needs call for continuing capital development support from individuals, foundations and corporations. Government grants, tuition fees and miscellaneous operational revenues of Loyola do not cover the expense of providing educational services. As with all universities, Loyola depends on the generosity of parents, graduates and friends to provide the additional funds required to meet construction and operating needs.

THE FACULTY ENDOWMENT FUND The need to keep pace with the growing demands for increased faculty membership of the highest qualification can be met only if an endowment fund of substantial size is available to supplement current revenue and grant funds.

THE VANIER LIBRARY ENDOWMENT FUND Contributions provide for the growth of library holdings and facilities at Loyola commensurate with student study and research needs.

SCHOLARSHIP AND BURSARY ENDOWMENT Loyola receives continous requests from talented and worthy students for financial aid. Both Annual and Funded scholarships and bursaries are sought to meet this need.

THE INSURANCE ENDOWMENT FUND A relatively small Life Insurance premium payment each year out of current Income can provide a gift to Loyola of substantial size. The death of the donor will not interrupt the completion of the gift, nor will the estate of the donor be diminished for the rest of the family.

ANNUAL SUPPORT APPEALS Appeals are made to parents, alumni, friends, corporations and foundations as a continuing means of supplementing revenue from student fees and government assistance. Contributions may be allocated to any of the above funds or donated on an "unrestricted" basis to be employed at the discretion of the College.

LOYOLA OF MONTREAL ALUMNI ASSOCIATION

The objects of this Association shall be to advance the interests and to promote the welfare of Loyola of Montreal, of the Association and its members, and to provide a vehicle through which former students of Loyola of Montreal maintain their interest and express their support of their alma mater, to disseminate information among former students relating to developments at the College, to foster continuing contacts between former students, and to conduct projects, organize events and to do all other things necessary and useful for the College.

During the course of the year, the Loyola of Montreal Alumni Association sponsors the Golf Tournament, the Oyster Party, the Sports Hall-of-Fame, Homecoming activities, an Alumni Sports Night, an evening at the Races, a Past-Presidents' Dinner, and Alumnae activities on a request basis. It also sponsors the selection and presentation of the Loyola Medal to outstanding Canadians. The Loyola of Montreal Alumni Association publishes a quarterly magazine, "The Alumnus", and offers the services of its office to aid individual classes in organizing and preparing Class Reunions.

A General Meeting is held every year. At this meeting officers and directors for the coming year are elected and all matters of general business transacted. The Loyola of Montreal Alumni Association sponsors the Alumni Student Loan Fund and the College Endowment Fund.

Annual giving by Alumni represents the largest single source of support to universities and colleges in North America. A regular yearly contribution to the Association aids a variety of programmes at the College.

The office of Bernard McCallum, the Director of Alumni Affairs, is located in the Hackett Building situated at 7270 Sherbrooke Street, West, Second Floor.

INDEX